



STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 163653

TO: Nita M Minnifield
Location: 3c01 / 3c18
Wednesday, August 31, 2005
Art Unit: 1645
Phone: 571-272-0860
Serial Number: 10 / 680349

From: Jan Delaval
Location: Biotech-Chem Library
Remsen 1a51
Phone: 571-272-2504
Email: jan.delaval@uspto.gov

Search Notes

Reviewed
2/06
MM

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From: Minnifield, Nita
Sent: Wednesday, August 24, 2005 12:48 PM
To: STIC-Biotech/ChemLib
Subject: interference sequence search request

10/680349

STIC

Please do an interference sequence search on SEQ ID NO: 41, 42 and aa 61-86 of SEQ ID NO: 42 of this application.

Please provide a paper copy of all results.

Thanks,
Minnifield,
71976
Art Unit 1645
Office REM-3C01
Mailbox REM-3C18
571-272-0860

STAFF USE ONLY

Searcher: C. J. ur
Searcher Phone: 2-2504
Date Searcher Picked up: 8/24/05
Date Completed: 8/31/05
Searcher Prep/Rev. Time: 17
Online Time: 20

Type of Search

NA#: ✓ AA#: ✓
Interference: ✓ SPDI: ✓
S/L: Oligomer:
Encode/Transl:
Structure#: Text:
Inventor: Litigation:

Vendors and cost where applicable

STN:
DIALOG:
QUESTEL/ORBIT:
LEXIS/NEXIS:
SEQUENCE SYSTEM:
WWW/Internet:
Other(Specify):

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APPLICANT: McBride, Jere W.
 APPLICANT: Yu, Xue-Jie
 TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
 FILE REFERENCE: D615CIP2
 CURRENT APPLICATION NUMBER: US/10/062,051
 CURRENT FILING DATE: 2002-01-31
 PRIOR APPLICATION NUMBER: US/09/660,587
 PRIOR FILING DATE: 2000-09-12
 PRIOR APPLICATION NUMBER: 09/261,358
 PRIOR FILING DATE: 1999-03-03
 NUMBER OF SEQ ID NOS: 46
 SEQ ID NO 41
 LENGTH: 840
 TYPE: DNA
 ORGANISM: Ehrlichia canis
 FEATURE:
 OTHER INFORMATION: nucleic acid sequence of *E. canis* p28-2
 US-10-062-051-41

	Query Match	Score	Length	DB	Match	Best Local Similarity	Pred. No.	Indels	Matches	Conservative	Mismatches	Gap
Qy	1 ATGATTATAGAAAATTCTAGTAGAAGCCGTTAATCTGATTAATGTCATCTTA	100.0%	840;	Qy	1 ATGATTATAGAAAATTCTAGTAGAAGCCGTTAATCTGATTAATGTCATCTTA	100.0%	840;	0	8e-172	0	0	
Db	61 TATCGATCTTGCAGATCCGTAGCTCAAGAACATACTGATAACAAAGGGCTTC			Qy	61 TATCGATCTTGCAGATCCGTAGCTCAAGAACATACTGATAACAAAGGGCTTC							
Db	61 TATCGATCTTGCAGATCCGTAGCTCAAGAACATACTGATAACAAAGGGCTTC			Db	61 TATCGATCTTGCAGATCCGTAGCTCAAGAACATACTGATAACAAAGGGCTTC							
Qy	121 ATTAGTGGAAAGTACAACTCCAAAGTATATCACACCTTGAAGAAATTCTGCTGAAGAA			Qy	181 CCTTATTATGGAACAAATTCTCACTTAAAGGTTTCGCACTAAAGAAGATGCT							
Db	121 ATTAGTGGAAAGTACAACTCCAAAGTATATCACACCTTGAAGAAATTCTGCTGAAGAA			Db	181 CCTTATTATGGAACAAATTCTCACTTAAAGGTTTCGCACTAAAGAAGATGCT							
Qy	241 ATACAAALAAAAGGCAATTACAGAGTGTACCTTGAAGAAATTCTGCTGAAGAA			Qy	301 ATATCGGATTTCAGGAAGTATCTGTTACTCTATGGACSGACCAAGAAATGAACTT							
Db	241 ATACAAALAAAAGGCAATTACAGAGTGTACCTTGAAGAAATTCTGCTGAAGAA			Db	301 ATATCGGATTTCAGGAAGTATCTGTTACTCTATGGACSGACCAAGAAATGAACTT							
Qy	361 GCTGCATTAACACATTAACTCCAAAACACCGATAACATGATACTGTAATGCT			Qy	421 TACTATAAACATTTGCAATTATCTGTAAGATGCAATGGAGATAACCAAGATACTG							
Db	361 GCTGCATTAACACATTAACTCCAAAACACCGATAACATGATACTGTAATGCT			Db	421 TACTATAAACATTTGCAATTATCTGTAAGATGCAATGGAGATAACCAAGATACTG							
Qy	481 CTTAAAAATGACGGCATACCTTATGCTTAAATCTGCTATGACATT			Qy	541 GCTGAAGGAGTATCTTCGACCATATGCTTGTGAGGTATAGGCCAGATCTTAC							
Db	481 CTTAAAAATGACGGCATACCTTATGCTTAAATCTGCTATGACATT			Db	541 GCTGAAGGAGTATCTTCGACCATATGCTTGTGAGGTATAGGCCAGATCTTAC							
Qy	601 ATTTTAAGACCTGATCTAAATTGCTTACCAAGGAAATAGCTTATGTTAC			Qy	661 ATCACACAGAAGTCCTGCTTAAATTGCTTACCAAGGAAATAGCTTATGTTAC							
Db	601 ATTTTAAGACCTGATCTAAATTGCTTACCAAGGAAATAGCTTATGTTAC			Db	661 ATCACACAGAAGTCCTGCTTAAATTGCTTACCAAGGAAATAGCTTATGTTAC							
Qy	721 TTGGAAGAATACCTGTTAACTCTCTGTGTTAAATGTCCTCAACCAACCA			Qy	721 TTGGAAGAATACCTGTTAACTCTCTGTGTTAAATGTCCTCAACCAACCA							

Qy 541 GCTGAGGGAGTATCTTCGTAACCATATGCTTGCGTAGGTATTAGGCAGATCTTTCACT 600
 Db 541 GCTGAGGGAGTATCTTCGTAACCATATGCTTGCGTAGGTATTAGGCAGATCTTTCACT 600
 Qy 601 ATTTTAAGAACCTCAATCTAAATTGCTTACCAAGGAAAATAGGTATAGTTACCT 660
 Db 601 ATTTTAAGAACCTCAATCTAAATTGCTTACCAAGGAAAATAGGTATAGTTACCT 660
 Qy 661 ATCACACCGAAGTCTCTGATTATTGGGATACTACCCATGGCCTTATGGTAAATAA 720
 Db 661 ATCACACCGAAGTCTCTGATTATTGGGATACTACCCATGGCCTTATGGTAAATAA 720
 Qy 721 TTGAGAAAGATACTCTGTTACCTGTAATGCTGTTACCTCTGTTACCTCTGTTACCT 780
 Db 721 TTGAGAAAGATACTCTGTTACCTGTAATGCTGTTACCTCTGTTACCTCTGTTACCT 780
 Qy 781 GCTTCAGTAACTCTTGACCTTGATACTTGGCGAGAAAATGGAAATGGTTCACCTTC 840
 Db 781 GCTTCAGTAACTCTTGACCTTGATACTTGGCGAGAAAATGGAAATGGTTCACCTTC 840

RESULT 5
 US-10-680-349-41
 ; Sequence 41, Application US/10680349
 ; GENERAL INFORMATION:
 ; APPLICANT: Walker, David H.
 ; MCBRIDE, Jere W.
 ; ATTORNEY: Yu, Xue-Jie
 ; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
 ; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
 ; FILE REFERENCE: D6152CP2.D1
 ; CURRENT APPLICATION NUMBER: US/10/680,349
 ; PRIOR APPLICATION NUMBER: US/10/062,624
 ; PRIOR FILING DATE: 2003-10-07
 ; OTHER INFORMATION: nucleic acid sequence of E. canis p28-2
 ; PRIOR FILING DATE: 2001-01-31
 ; NUMBER OF SEQ ID NOS: 46
 ; SEQ ID NO: 41
 ; LENGTH: 840
 ; TYPE: DNA
 ; ORGANISM: Ehrlichia canis
 ; FEATURE:
 ; OTHER INFORMATION: nucleic acid sequence of E. canis p28-2

US-10-680-349-41
 ; Sequence 41, Application US/10731554
 ; Publication No. US2004024761A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Walker, David H.
 ; MCBRIDE, Jere W.
 ; ATTORNEY: Yu, Xue-Jie
 ; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
 ; FILE REFERENCE: D6152CP2
 ; CURRENT APPLICATION NUMBER: US/10/731-554
 ; CURRENT FILING DATE: 2003-12-09
 ; PRIOR APPLICATION NUMBER: US/10/680,349
 ; PRIOR FILING DATE: 2001-03-16
 ; NUMBER OF SEQ ID NOS: 46
 ; SEQ ID NO: 41
 ; LENGTH: 840
 ; TYPE: DNA
 ; ORGANISM: Ehrlichia canis
 ; FEATURE:
 ; OTHER INFORMATION: nucleic acid sequence of E. canis p28-2
 ; OTHER INFORMATION: Query Match 100.0%; Score 840; DB 20; Length 840;
 ; Best Local Similarity 100.0%; Pred. No. 8e-172;
 ; Matches 840; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 ATGAAATTAGAAATTCTAGTAAAGCGCTTAATCTCATTAATGCTCACTCTTACCA 60
 Db 1 ATGAAATTAGAAATTCTAGTAAAGCGCTTAATCTCATTAATGCTCACTCTTACCA 60
 Qy 61 TATCAGTCCTTGCAGATCTGTAGGTTACAGACTGAGCTTAATGATAACAAGGCTCTAC 120
 Db 61 TATCAGTCCTTGCAGATCTGTAGGTTACAGACTGAGCTTAATGATAACAAGGCTCTAC 120
 Qy 121 ATTAGTCGAAGTACAATCCAACTATATACAACCTTGTAGAAATCTCTGCTGAGAAACT 180
 Db 121 ATTAGTCGAAGTACAATCCAACTATATACAACCTTGTAGAAATCTCTGCTGAGAAACT 180
 Qy 181 CCTTTAATGGAAACAATTCTCACTAAAGACTAAAGTTCGACTAAAGAAAGTGGTGT 240
 Db 181 CCTTTAATGGAAACAATTCTCACTAAAGACTAAAGTTCGACTAAAGAAAGTGGTGT 240
 Qy 241 ATAACAAAAAAAGGAGATTACAGAGTGTCAAGGATGCTCAGGATTTGATTTCAGAAATAACTTA 300
 Db 241 ATAACAAAAAAAGGAGATTACAGAGTGTCAAGGATGCTCAGGATTTGATTTCAGAAATAACTTA 300
 Qy 301 ATATCAGGATTTCAGGAGGTACTGGTTACTCTATGGAGGACCAAGAATAGAACTGTGAA 360
 Db 301 ATATCAGGATTTCAGGAGGTACTGGTTACTCTATGGAGGACCAAGAATAGAACTGTGAA 360

Qy 361 GTGCAATPATCACAAATTAACTCAAATAACCCGATAATGATGATCTGATAATGGTAA 420
 Db 361 GCTGCAATPATCACAAATTAACTCAAATAACCCGATAATGATGATCTGATAATGGTAA 420
 Qy 421 TACTATAAACATTGGATTATCTCGTAAGATGCAATATGTPAGTA 480
 Db 421 TACTATAAACATTGGATTATCTCGTAAGATGCAATATGTPAGTA 480
 Qy 481 CTTAAAATGAGGGATAACTTTTATGCTATGCTATGCTATGCTATGCTATGCTATGCT 540
 Db 481 CTTAAAATGAGGGATAACTTTTATGCTATGCTATGCTATGCTATGCTATGCTATGCT 540
 Qy 541 GTGAAAGGAGTACTCTGACCATATGCTGAGGTATAGGAGAGTCTTACT 600
 Db 541 GTGAAAGGAGTACTCTGACCATATGCTGAGGTATAGGAGAGTCTTACT 600
 Qy 601 ATTTTAAGAACCTCATCTAAATGCTTACCAAGGAAAATGGTTAGTTACCT 660
 Db 601 ATTTTAAGAACCTCATCTAAATGCTTACCAAGGAAAATGGTTAGTTACCT 660

Qy 661 ATCACACCGAAGTCTCTGATTATTGGGATACTACCCATGGCCTTATGGTAAATAA 720
 Db 661 ATCACACCGAAGTCTCTGATTATTGGTAAATACTGGCTTATGGTAAATAA 720

Qy 721 TTGAGAAAGATACTCTGTTACCTGTAATGCTGTTACCTCTGTTACCTCTGTTACCT 780
 Db 721 TTGAGAAAGATACTCTGTTACCTGTAATGCTGTTACCTCTGTTACCTCTGTTACCT 780

Qy 781 GCCTCACTAACTCTGACCTTGATACTTGGCGAGAAAATGGAAATGGTTCACCTTC 840
 Db 781 GCCTCACTAACTCTGACCTTGATACTTGGCGAGAAAATGGAAATGGTTCACCTTC 840

Db 781 GCCTCACTAACTCTGACCTTGATACTTGGCGAGAAAATGGAAATGGTTCACCTTC 840

RESULT 6
 US-10-731-554-41
 ; Sequence 41, Application US/10731554
 ; Publication No. US2004024761A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Walker, David H.
 ; ATTORNEY: Yu, Xue-Jie
 ; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
 ; FILE REFERENCE: D6152CP2
 ; CURRENT APPLICATION NUMBER: US/10/731-554
 ; CURRENT FILING DATE: 2003-12-09
 ; PRIOR APPLICATION NUMBER: US/10/680,349
 ; PRIOR FILING DATE: 2001-03-16
 ; NUMBER OF SEQ ID NOS: 46
 ; SEQ ID NO: 41
 ; LENGTH: 840
 ; TYPE: DNA
 ; ORGANISM: Ehrlichia canis
 ; FEATURE:
 ; OTHER INFORMATION: Query Match 100.0%; Score 840; DB 20; Length 840;
 ; Best Local Similarity 100.0%; Pred. No. 8e-172;
 ; Matches 840; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 ATGAAATTATAAGAAATTCTACTAAAGTGTCAAGGATTTCTACTAAATGTCATCTTACCA 60
 Db 1 ATGAAATTATAAGAAATTCTACTAAAGTGTCAAGGATTTCTACTAAATGTCATCTTACCA 60
 Qy 61 TATCAGTCCTTGCAGATCTGTAGGTTACAGACTGAGCTTAATGATAACAAGGCTCTAC 120
 Db 61 TATCAGTCCTTGCAGATCTGTAGGTTACAGACTGAGCTTAATGATAACAAGGCTCTAC 120
 Qy 121 ATTAGTCGAAGTACAATCCAACTATATACAACCTTGTAGAAATCTCTGCTGAGAACT 180
 Db 121 ATTAGTCGAAGTACAATCCAACTATATACAACCTTGTAGAAATCTCTGCTGAGAACT 180
 Qy 181 CCTTTAATGGAAACAATTCTCACTAAAGACTAAAGTTCGACTAAAGAAAGTGGTGT 240
 Db 181 CCTTTAATGGAAACAATTCTCACTAAAGACTAAAGTTCGACTAAAGAAAGTGGTGT 240
 Qy 241 ATAACAAAAAAAGGAGATTACAGAGTGTCAAGGATGCTCAGGATTTGATTTCAGAAATAACTTA 300
 Db 241 ATAACAAAAAAAGGAGATTACAGAGTGTCAAGGATGCTCAGGATTTGATTTCAGAAATAACTTA 300
 Qy 301 ATATCAGGATTTCAGGAGGTACTGGTTACTCTATGGAGGACCAAGAATAGAACTGTGAA 360
 Db 301 ATATCAGGATTTCAGGAGGTACTGGTTACTCTATGGAGGACCAAGAATAGAACTGTGAA 360

Qy 361 ATGAAATTATAAGAAATTCTACTAAAGTGTCAAGGATTTCTACTAAATGTCATCTTACCA 60
 Db 361 ATGAAATTATAAGAAATTCTACTAAAGTGTCAAGGATTTCTACTAAATGTCATCTTACCA 60
 Qy 421 ATGAAATTATAAGAAATTCTACTAAAGTGTCAAGGATTTCTACTAAATGTCATCTTACCA 60
 Db 421 ATGAAATTATAAGAAATTCTACTAAAGTGTCAAGGATTTCTACTAAATGTCATCTTACCA 60
 Qy 481 ATGAAATTATAAGAAATTCTACTAAAGTGTCAAGGATTTCTACTAAATGTCATCTTACCA 60
 Db 481 ATGAAATTATAAGAAATTCTACTAAAGTGTCAAGGATTTCTACTAAATGTCATCTTACCA 60
 Qy 541 ATGAAATTATAAGAAATTCTACTAAAGTGTCAAGGATTTCTACTAAATGTCATCTTACCA 60
 Db 541 ATGAAATTATAAGAAATTCTACTAAAGTGTCAAGGATTTCTACTAAATGTCATCTTACCA 60
 Qy 601 ATGAAATTATAAGAAATTCTACTAAAGTGTCAAGGATTTCTACTAAATGTCATCTTACCA 60
 Db 601 ATGAAATTATAAGAAATTCTACTAAAGTGTCAAGGATTTCTACTAAATGTCATCTTACCA 60
 Qy 661 ATGAAATTATAAGAAATTCTACTAAAGTGTCAAGGATTTCTACTAAATGTCATCTTACCA 60
 Db 661 ATGAAATTATAAGAAATTCTACTAAAGTGTCAAGGATTTCTACTAAATGTCATCTTACCA 60
 Qy 721 ATGAAATTATAAGAAATTCTACTAAAGTGTCAAGGATTTCTACTAAATGTCATCTTACCA 60
 Db 721 ATGAAATTATAAGAAATTCTACTAAAGTGTCAAGGATTTCTACTAAATGTCATCTTACCA 60
 Qy 781 ATGAAATTATAAGAAATTCTACTAAAGTGTCAAGGATTTCTACTAAATGTCATCTTACCA 60
 Db 781 ATGAAATTATAAGAAATTCTACTAAAGTGTCAAGGATTTCTACTAAATGTCATCTTACCA 60
 Qy 781 ATGAAATTATAAGAAATTCTACTAAAGTGTCAAGGATTTCTACTAAATGTCATCTTACCA 60
 Db 781 ATGAAATTATAAGAAATTCTACTAAAGTGTCAAGGATTTCTACTAAATGTCATCTTACCA 60

RESULT 7
 US-10-059-964-47
 Sequence 47, Application US/10059964
 Publication No. US20020120115A1
 GENERAL INFORMATION:
 APPLICANT: Rikihsia, Yasuko
 ; APPLICANT: Ohasi, No. US20020120115A1
 ; TITLE OF INVENTION: Outer Membrane Protein of *Ehrlichia canis* and *Ehrlichia chaffeensis*
 FILE REFERENCE: 2272/04021
 CURRENT FILING DATE: 2002-01-28
 EARLIER APPLICATION NUMBER: US/10/059, 964
 ; EARLIER FILING DATE: 1999-05-19
 ; NUMBER OF SEQ ID NOS: 66
 ; SOFTWARE: PatentIn Ver. 2.0
 ; LENGTH: 843
 ; TYPE: DNA
 ; ORGANISM: *Ehrlichia canis*
 ; FEATURE: CDS
 ; NAME/KEY: (1) .. (843)
 ; LOCATION:

US-10-059-964-47
 Query Match 100.0%; Score 840; DB 13; Length 843;
 Best Local Similarity 100.0%; Pred. No. 8 1e-172;
 Matches 840; Conservative 0; Mismatches 0; Gaps 0;
 Qy 1 ATGATTTATAAGAAAATTCTCTAGTAACTTGTCAATTCTCGTACCA 60
 Db 1 ATGATTTATAAGAAAATTCTCTAGTAACTTGTCAATTCTCGTACCA 60
 Qy 61 TATCAGTCCTTSCAGATCCTGTAGGTCAAGACTTGTATACTGCCTCTAC 120
 Db 61 TATCAGTCCTTSCAGATCCTGTAGGTCAAGACTTGTATACTGCCTCTAC 120
 Qy 1.2.1 ATTAGTGCAGAAGTACAATCCAAGTATATCACACTTGAAGAAACT 180
 Db 12.1 ATTAGTGCAGAAGTACAATCCAAGTATATCACACTTGAAGAAACT 180
 Qy 181 CCTATTAACTGGACAATTCTCTACACTTGAAGAAAGTGTGAACT 240
 Db 181 CCTATTAACTGGACAATTCTCTACACTTGAAGAAAGTGTGAACT 240
 Qy 241 ATAACAAAAAAAGACGATTTCAGAGTATGCTCCAGGCCATGTTTCAAATAACTTA 300
 Db 241 ATAACAAAAAAAGACGATTTCAGAGTATGCTCCAGGCCATGTTTCAAATAACTTA 300
 Qy 301 ATATCAGGATTTCAGGAAGTACTCTATGGCGGACCAAGAATAGACTGAA 360
 Db 301 ATATCAGGATTTCAGGAAGTACTCTATGGCGGACCAAGAATAGACTGAA 360
 Qy 361 GCTGCATATCAACATTATTCTCCAAACACCATAAACATGATACTCATTAATGGTCAA 420
 Db 361 GCTGCATATCAACATTATTCTCCAAACACCATAAACATGATACTCATTAATGGTCAA 420
 Qy 421 TACTATAAACTTTGCAATTATCGTAAGGAAATCGGATATGTGATA 480
 Db 421 TACTATAAACTTTGCAATTATCGTAAGGAAATCGGATATGTGATA 480
 Qy 481 CTTAAAATGAGGCCATAACTTTTATGCTATTGTCAATTGCAATTACATTACA 540
 Db 481 CTTAAAATGAGGCCATAACTTTTATGCTATTGTCAATTGCAATTACATTACA 540
 Qy 541 GCTGAAGGGATATCTTCGFPACCATATGCTGTGCAAGGTATAGGCAAGATCTTATCCT 600
 Db 541 GCTGAAGGGATATCTTCGFPACCATATGCTGTGCAAGGTATAGGCAAGATCTTATCCT 600
 Qy 601 ATTPTTAAAGACCTCAATTCTAAATTGGTACCTTATGGTAAATTGTTACCT 660
 Db 601 ATTPTTAAAGACCTCAATTCTAAATTGGTACCTTATGGTAAATTGTTACCT 660
 Qy 661 ATCACACCAGAGTCCTGCATTATTGGGGATACTACCATGGCGTTATTGGTAAATTAA 720
 Db 661 ATCACACCAGAGTCCTGCATTATTGGGGATACTACCATGGCGTTATTGGTAAATTAA 720
 Qy 721 TTGGAAGAAGTACCTGTAATTAACCTCTGTPGATTTAATGATGCTCTCAACACATCT 780
 Db 721 TTGGAAGAAGTACCTGTAATTAACCTCTGTPGATTTAATGATGCTCTCAACACATCT 780
 Qy 781 GCTTCAGTGAACCTGACGTGGAACTCTGGCGAGAAATTGGAAATGGGTTACCTTC 840
 Db 781 GCTTCAGTGAACCTGACGTGGAACTCTGGCGAGAAATTGGAAATGGGTTACCTTC 840

RESULT 8
 US-10-314-639-47
 Sequence 47, Application US/10314639
 ; Publication No. US20030103991A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Rikihsia, Yasuko
 ; APPLICANT: Ohasi, No. US20030103991A1
 ; TITLE OF INVENTION: Outer Membrane Protein of *Ehrlichia canis* and *Ehrlichia chaffeensis*
 ; FILE REFERENCE: 2272/04021
 ; CURRENT FILING DATE: 2002-01-28
 ; EARLIER APPLICATION NUMBER: 09/314, 701
 ; EARLIER FILING DATE: 1999-05-19
 ; NUMBER OF SEQ ID NOS: 66
 ; SOFTWARE: PatentIn Ver. 2.0
 ; LENGTH: 843
 ; TYPE: DNA
 ; ORGANISM: *Ehrlichia canis*
 ; FEATURE: CDS
 ; NAME/KEY: (1) .. (843)
 ; LOCATION:

CURRENT APPLICATION NUMBER: US/10/314,639
 CURRENT FILING DATE: 2002-12-09
 PRIOR APPLICATION NUMBER: US/09/314,701
 PRIOR FILING DATE: 1999-05-19
 NUMBER OF SEQ ID NOS: 66
 SOFTWARE: PatentIn Ver. 2.0
 SEQ ID NO 47
 LENGTH: 843
 TYPE: DNA
 ORGANISM: *Ehrlichia canis*
 FEATURE:
 NAME/KEY: CDS
 LOCATION: (1) .. (843)

US-10-314-639-47

Query Match	Score	Local Similarity	Score	Local Similarity	Score	Local Similarity	Score	Local Similarity	Score	
Matches	840	100.0%	840	100.0%	840	100.0%	840	100.0%	840	
		Best Local Match		Pred. No.		Mismatch				
		840		0		0				
Qy	1	ATGATTATAAGAAAATTCTAAGTAAAGAACGGCC	61	TATCAGTCCTTGAGATCCTGTAGGTTCAA	61	TATCAGTCCTTGAGATCCTGTAGGTTCAA	121	ATTAGTGCAGGTACAATCCAAGTATATCAC	121	ATTAGTGCAGGTACAATCCAAGTATATCAC
Ddb	1	ATGATTATAAGAAAATTCTAAGTAAAGAACGGCC	61	TATCAGTCCTTGAGATCCTGTAGGTTCAA	61	TATCAGTCCTTGAGATCCTGTAGGTTCAA	181	CCTATTAAATGGAAACAATTCTCTCACTAAAA	181	CCTATTAAATGGAAACAATTCTCTCACTAAAA
Qy	121	ATTAGTGCAGGTACAATCCAAGTATATCAC	121	ATTAGTGCAGGTACAATCCAAGTATATCAC	181	ATTACAAAAAAAGCAGATTCAAGAGTAGG	241	ATTACAAAAAAAGCAGATTCAAGAGTAGG	301	ATATCGGATTTCAGGAAGTATTGGTACTT
Ddb	121	ATTAGTGCAGGTACAATCCAAGTATATCAC	181	ATTAGTGCAGGTACAATCCAAGTATATCAC	241	ATTACAAAAAAAGCAGATTCAAGAGTAGG	301	ATATCGGATTTCAGGAAGTATTGGTACTT	361	GCTGCCATATCAACATTAAATCCAAAAAACAA
Qy	181	CCTATTAAATGGAAACAATTCTCTCACTAAAA	181	CCTATTAAATGGAAACAATTCTCTCACTAAAA	241	ATTACAAAAAAAGCAGATTCAAGAGTAGG	241	ATTACAAAAAAAGCAGATTCAAGAGTAGG	361	GCTGCCATATCAACATTAAATCCAAAAAACAA
Ddb	181	CCTATTAAATGGAAACAATTCTCTCACTAAAA	241	ATTACAAAAAAAGCAGATTCAAGAGTAGG	241	ATTACAAAAAAAGCAGATTCAAGAGTAGG	361	GCTGCCATATCAACATTAAATCCAAAAAACAA		
Qy	241	ATTACAAAAAAAGCAGATTCAAGAGTAGG	241	ATTACAAAAAAAGCAGATTCAAGAGTAGG	301	ATATCGGATTTCAGGAAGTATTGGTACTT	421	TACTATAACATTTCGATTATTCGTAAGAG	481	CTTAAAAATGACGCCATAACTTTATGTCAT
Ddb	241	ATTACAAAAAAAGCAGATTCAAGAGTAGG	301	ATATCGGATTTCAGGAAGTATTGGTACTT	421	TACTATAACATTTCGATTATTCGTAAGAG	481	CTTAAAAATGACGCCATAACTTTATGTCAT	541	GCTGAAGGAGTAATCTTCGTCACCATATGAT
Qy	301	ATATCGGATTTCAGGAAGTATTGGTACTT	361	GCTGCCATATCAACATTAAATCCAAAAAACAA	421	TACTATAACATTTCGATTATTCGTAAGAG	481	CTTAAAAATGACGCCATAACTTTATGTCAT	601	ATTTTAAAGACCCCAATTAATCTCTGTT
Ddb	361	GCTGCCATATCAACATTAAATCCAAAAAACAA	421	TACTATAACATTTCGATTATTCGTAAGAG	481	CTTAAAAATGACGCCATAACTTTATGTCAT	601	ATTTTAAAGACCCCAATTAATCTCTGTT	661	ATCACACCAAGAATCTCGTAAATAACTCTCTG
Qy	421	TACTATAACATTTCGATTATTCGTAAGAG	481	CTTAAAAATGACGCCATAACTTTATGTCAT	541	GCTGAAGGAGTAATCTTCGTCACCATATGAT	661	ATTCAGAAGATACCTGTAAATAACTCTCTG	721	TTCAGAAGATACCTGTAAATAACTCTCTG
Ddb	481	CTTAAAAATGACGCCATAACTTTATGTCAT	541	GCTGAAGGAGTAATCTTCGTCACCATATGAT	601	ATTTTAAAGACCCCAATTAATCTCTGTT	721	TTCAGAAGATACCTGTAAATAACTCTCTG	781	GCCTCAGTAACCTGTGACTTGTGATACCTG

RESULT 9
US-10-901-714-47
Sequence 47, Application US/10901714
Publication No. US20040265333A1
GENERAL INFORMATION:
APPLICANT: OIKAWA, YASUO
TITLE OF INVENTION: OUTER MEMBRANE PROTEIN OF EHRLICHIA CANIS AND EHRLICHIA
TITLE OF INVENTION: CHAPERONINS
FILE REFERENCE: 22777-04109
CURRENT APPLICATION NUMBER: US/10/901,714
CURRENT FILING DATE: 2004-07-29
PRIOR APPLICATION NUMBER: 09/314,701
PRIOR FILING DATE: 1999-05-19
PRIOR APPLICATION NUMBER: 60/100,843
PRIOR FILING DATE: 1998-09-18
NUMBER OF SEQ ID NOS: 69
SOFTWARE: PatentIn Ver. 3.2
SEQ ID NO: 47
LENGTH: 843
TYPE: DNA
ORGANISM: Ehrlichia canis
US-10-901-714-47

Query	Match	Score	DB	Length
Qy	ATGATTATAAGAAAAATTCTAGTAAAGAACGGCGTTAATCTCATTAAATGTCAATCTTACCA	100.0%	840;	843;
Db	ATGATTATAAGAAAAATTCTAGTAAAGAACGGCGTTAATCTCATTAAATGTCAATCTTACCA	100.0%	8.1e-172;	
Qy	TATCAGCTTTGAGATCTGTAGTTCAAGACTATGATAACAAAGGGCTCTAC	100.0%	0;	
Db	TATCAGCTTTGAGATCTGTAGTTCAAGACTATGATAACAAAGGGCTCTAC	100.0%	0;	
Qy	ATTAGTGCAGTACAATCCAAGTATACACATTAGAAAATTCTGCTGTGAAGAAC	100.0%	0;	
Db	ATTAGTGCAGTACAATCCAAGTATACACATTAGAAAATTCTGCTGTGAAGAAC	100.0%	0;	
Qy	CCTATTATGGAAACAAATTCTCTCACTAAAAAAGTTTCGGACTAAAGAAAGATGGTGAT	100.0%	0;	
Db	CCTATTATGGAAACAAATTCTCTCACTAAAAAAGTTTCGGACTAAAGAAAGATGGTGAT	100.0%	0;	
Qy	ATACAAAAGGCAATTACAGAGTAGCTCCAGGCAATTGATTTCAAATACTTA	100.0%	0;	
Db	ATACAAAAGGCAATTACAGAGTAGCTCCAGGCAATTGATTTCAAATACTTA	100.0%	0;	
Qy	ATATCGGATTTCAGGAACTTGGTTACTCTATGACGGACCAAGAAATACTGAA	100.0%	0;	
Db	ATATCGGATTTCAGGAACTTGGTTACTCTATGACGGACCAAGAAATACTGAA	100.0%	0;	
Qy	GCTGCATATCAACAAATTAAATCCAAAAAACACCGATAACATGATCTGATAATGGTGAA	100.0%	0;	
Db	GCTGCATATCAACAAATTAAATCCAAAAAACACCGATAACATGATCTGATAATGGTGAA	100.0%	0;	
Qy	TACTAAACATTTGCAATTCTCGTAANGTGAATGAAAGATAAGCATATGAGTA	100.0%	0;	
Db	TACTAAACATTTGCAATTCTCGTAANGTGAATGAAAGATAAGCATATGAGTA	100.0%	0;	
Qy	CTTAAAATGACGGCATAACTTTATGCAATTGTTAAACTTGCTATGACATTACA	100.0%	0;	
Db	CTTAAAATGACGGCATAACTTTATGCAATTGTTAAACTTGCTATGACATTACA	100.0%	0;	
Qy	GCTGAAAGGAGTATCTTCGACCATATGCAATGTCAGGTATAGGAGCAGATCTTCACT	100.0%	0;	
Db	GCTGAAAGGAGTATCTTCGACCATATGCAATGTCAGGTATAGGAGCAGATCTTCACT	100.0%	0;	
Qy	ATTTAAAGGCACTCACTAAATTGCTTACCAAGGAAATTGAGTATGTTACCT	100.0%	0;	

; PRIOR APPLICATION NUMBER: 09/314,701
 ; PRIOR FILING DATE: 1999-05-19
 ; PRIOR APPLICATION NUMBER: 60/100,843
 ; PRIOR FILING DATE: 1998-09-18
 ; NUMBER OF SEQ ID NOS: 69
 ; SOFTWARE: PatentIn Ver. 3.2
 ; SEQ ID NO: 3
 ; LENGTH: 852
 ; TYPE: DNA
 ; ORGANISM: *Ehrlichia chaffeensis*
 ; SEQ ID: 10-901-714-3
 ; Query Match Score 598.6; DB 20; Length 852;
 Best Local Similarity 82.6%; Pred. No. 1.e-119;
 Matches 701; Conservative 0; Mismatches 139;
 Indels 9; Gaps 1;
 Qy 1 ATGAAATTAGAAAATTCTGTAAGAAGGGCGRTAAATCTCATTAATGCAATCTTACCA 60
 Db 1 ATGAAATTAGAAAATTCTGTAAGAAGGGCGRTAAATCTCATTAATGCAATCTTACCT 60
 Qy 61 TATCAGCTTTGCGAGATCCGTAGGTTCAA-----GAACATATGATAAACAAAGAA 111
 Db 61 TACCAATCTTGTGAGATCCTGAACTCTCAAAATGATAACGGATACAGCAACCGAGCAA 120
 Qy 112 GGCTTCTCATTTAGTGCAGAACTCAAGTATATCACACTTGAATACTCTCGCT 171
 Db 121 GGCTTCTCATTTAGTGTAAAGTATAATCCAGATATCACACTTCGAAATTCAGCT 180
 Qy 172 GAGAAAATCTCTTAAATGAAAGAAATTCTCACTAAAGTTTCGGACTAAAGAAA 231
 Db 181 GAGAAGTCCCATCAATGAAATACCTCTACATAAAAGTTGGGTGAAAAA 240
 Qy 232 GATGGTGATATAACAAAAAGAGCATTACAGAGTATGGTACTCTATGGAGGCCAGAGATA 291
 Db 241 GACGGAGATAGACAACTCGCGAATTTAACAGGAGTATGGTTATGCGTTCTG 300
 Qy 292 AATACCTTAATTCAGGATTTCAGGAGTATGGTACTCTATGGAGGCCAGAGATA 351
 Db 301 AATFAACCTTAATTCAGGATTTCAGGAGTATGGTTATGCGTTATGCG 360
 Qy 352 GACCTTGAGCTGCAATCAACATTTAACACCCGATAAACATGATACTGAT 411
 Db 361 GACCTTGAGCTGCAATCAACATTTAACACCCGATAAACATGATACTGAT 420
 Qy 412 AATGGTGAAATCTATAACATTTCGCAATTCTCGTAAGAGTGCATGAAATGCAAGAA 471
 Db 421 AGGGTGACTCTATAAACTTGGACTATCTCGTGAAAGCCAAATGCAAGAA 480
 Qy 472 TATGTAATGACTTAAATGCGGATAACTTTATGTCATGTTAAATCTTGTAT 531
 Db 481 TATGTTGTCCTTAAATGAGGCTCATCTTTATGTCATTAATGTTAAACTTGTAT 540
 Qy 532 GACATTACAGCTGAGGGACTATCTTCGTCACATGTCAGGTAGGAGAGCAT 591
 Db 541 GACATTACAGCTGAGGGACTATCTTCGTCACATGTCAGGTAGGAGAGCAT 600
 Qy 592 CTTATCACTTAAATGAGGCTCAATCTAAATTGCTTACCAAGGGAAAATAGGTATT 651
 Db 601 CTTATAAACGTTAAATGAGGTTAAATTCTCATACCAAGGGAAAATAGGTATT 660
 Qy 712 GGTAAATAATTTGAGAAGATACTCTGTAATAACTCTGTAGTAAATGTCCTCAA 771
 Db 721 GGAATAATTAAACAAATACCTGTAATAACCTGTTACACTGTAGTAAATGGAGCTCAA 780
 Qy 772 ACCACATCTGCTCAGTAACCTCTGACGTGTTGAGTACTCTGGCGGAGAAATGGAAATGG 831
 Db 781 AACACATCTGCGCTGAGTAACTGACATGGTACCTCCGGAGGTAAAGTGGTAAGG 840
 Qy 832 TTACCCCTTC 840
 ; Sequence 3, Application US/109011774
 ; GENERAL INFORMATION: US20040265334A1
 ; APPLICANT: RIKHISA, YASUO
 ; APPLICANT: OHASHI, NORIO
 ; TITLE OF INVENTION: OUTER MEMBRANE PROTEIN OF EHRЛИCHIA CANIS AND EHRЛИCHIA
 ; TITLE OF INVENTION: CHAFFEENSIS
 ; CURRENT APPLICATION NUMBER: US/10/901,774
 ; CURRENT FILING DATE: 2004-07-29
 ; PRIORITY NUMBER: 09/314,701
 ; PRIORITY FILING DATE: 1999-05-19
 ; PRIORITY NUMBER: 60/1,00,843
 ; PRIORITY FILING DATE: 1998-09-18
 ; NUMBER OF SEQ ID NOS: 69
 ; SOFTWARE: PatentIn Ver. 3.2
 ; SEQ ID NO: 3
 ; TYPE: DNA
 ; ORGANISM: *Ehrlichia chaffeensis*
 ; US-10-901-774-3
 Query Match Score 598.6; DB 20; Length 852;
 Best Local Similarity 82.6%; Pred. No. 1.e-119;
 Matches 701; Conservative 0; Mismatches 139; Indels 9; Gaps 1;
 Qy 1 ATGAAATTAGAAAATTCTGTAAGAAGGGCGRTAAATCTCATTAATGCAATCTTACCA 60
 Db 1 ATGAAATTAGAAAATTCTGTAAGAAGGGCGRTAAATCTCATTAATGCAATCTTACCT 60
 Qy 61 TATCAGCTTTGCGAGATCCGTAGGTTCAA-----GAACATATGATAAACAAAGAA 111
 Db 61 TACCAATCTTGTGAGATCCTGAACTCTCAAAATGATAACGGATACAGCAACCGAGCAA 120
 Qy 112 GGCTTCTCATTTAGTGCAGAACTCAAGTATATCACACTTGAATACTCTCGCT 171
 Db 121 GGCTTCTCATTTAGTGTAAAGTATAATCCAGATATCACACTTCGAAATTCAGCT 180
 Qy 172 GAGAAAATCTCTTAAATGAAAGAAATTCTCACTAAAGTTTCGGACTAAAGAAA 231
 Db 181 GAGAAGTCCCATCAATGAAATACCTCTACATAAAAGTTGGGTGAAAAA 240
 Qy 232 GATGGTGATATAACAAAAAGAGCATTACAGAGTATGGTACTCTATGGAGGCCAGAGATA 291
 Db 241 GACGGAGATAGACAACTCGCGAATTTAACAGGAGTATGGTTATGCGTTCTG 300
 Qy 292 AATACCTTAATTCAGGATTTCAGGAGTATGGTACTCTATGGAGGCCAGAGATA 351
 Db 301 AATFAACCTTAATTCAGGATTTCAGGAGTATGGTTATGCGTTATGCG 360
 Qy 352 GACCTTGAGCTGCAATCAACATTTAACACCCGATAAACATGATACTGAT 411
 Db 361 GACCTTGAGCTGCAATCAACATTTAACACCCGATAAACATGATACTGAT 420
 Qy 412 AATGGTGAAATCTATAACATTTCGCAATTCTCGTAAGAGTGCATGAAATGCAAGAA 471
 Db 421 AGGGTGACTCTATAAACTTGGACTATCTCGTGAAAGCCAAATGCAAGAA 480
 Qy 472 TATGTAATGACTTAAATGCGGATAACTTTATGTCATGTTAAATCTTGTAT 531
 Db 481 TATGTTGTCCTTAAATGAGGCTCATCTTTATGTCATTAATGTTAAACTTGTAT 540
 Qy 532 GACATTAGCTGAGGACTATCTTCGTCACATGTCAGGTAGGAGAGCAT 591
 Db 541 GACATTACAGCTGAGGGACTATCTTCGTCACATGTCAGGTAGGAGAGCAT 600
 Qy 592 CTTATCACTTAAATGAGGCTCAATCTAAATTGCTTACCAAGGGAAAATAGGTATT 651
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 Qy 712 GGTAAATAATTTGAGAAGATACTCTGTAATAACTCTGTAGTAAATGTCCTCAA 771
 Db 721 GGAATAATTAAACAAATACCTGTAATAACCTGTTACACTGTAGTAAATGGAGCTCAA 780
 Qy 772 ACCACATCTGCTCAGTAACCTCTGACGTGTTGAGTACTCTGGCGGAGAAATGGAAATGG 831
 Db 781 AACACATCTGCGCTGAGTAACTGACATGGTACCTCCGGAGGTAAAGTGGTAAGG 840
 Qy 832 TTACCCCTTC 840
 ; Sequence 3, Application US/109011774
 ; GENERAL INFORMATION: US20040265334A1
 ; APPLICANT: RIKHISA, YASUO
 ; APPLICANT: OHASHI, NORIO
 ; TITLE OF INVENTION: OUTER MEMBRANE PROTEIN OF EHRЛИCHIA CANIS AND EHRЛИCHIA
 ; TITLE OF INVENTION: CHAFFEENSIS
 ; CURRENT APPLICATION NUMBER: US/10/901,774
 ; CURRENT FILING DATE: 2004-07-29
 ; PRIORITY NUMBER: 09/314,701
 ; PRIORITY FILING DATE: 1999-05-19
 ; PRIORITY NUMBER: 60/1,00,843
 ; PRIORITY FILING DATE: 1998-09-18
 ; NUMBER OF SEQ ID NOS: 69
 ; SOFTWARE: PatentIn Ver. 3.2
 ; SEQ ID NO: 3
 ; TYPE: DNA
 ; ORGANISM: *Ehrlichia chaffeensis*
 ; US-10-901-774-3
 Query Match Score 598.6; DB 20; Length 852;
 Best Local Similarity 82.6%; Pred. No. 1.e-119;
 Matches 701; Conservative 0; Mismatches 139; Indels 9; Gaps 1;
 Qy 1 ATGAAATTAGAAAATTCTGTAAGAAGGGCGRTAAATCTCATTAATGCAATCTTACCA 60
 Db 1 ATGAAATTAGAAAATTCTGTAAGAAGGGCGRTAAATCTCATTAATGCAATCTTACCT 60
 Qy 61 TATCAGCTTTGCGAGATCCGTAGGTTCAA-----GAACATATGATAAACAAAGAA 111
 Db 61 TACCAATCTTGTGAGATCCTGAACTCTCAAAATGATAACGGATACAGCAACCGAGCAA 120
 Qy 112 GGCTTCTCATTTAGTGCAGAACTCAAGTATATCACACTTGAATACTCTCGCT 171
 Db 121 GGCTTCTCATTTAGTGTAAAGTATAATCCAGATATCACACTTCGAAATTCAGCT 180
 Qy 172 GAGAAAATCTCTTAAATGAAAGAAATTCTCACTAAAGTTTCGGACTAAAGAAA 231
 Db 181 TACCAATCTTGTGAGATCCTGAACTCTCAAAATGATAACGGATACAGCAACCGAGCAA 120
 Qy 232 GATGGTGATATAACAAAAAGAGCATTACAGAGTATGGTACTCTATGGAGGCCAGAGATA 291
 Db 241 GACGGAGATAGCTCCCATCAATGCAAATCTCATCAAAATGGTTTCGGCTGAAAGAAA 240
 Qy 292 AATACCTTAATTCAGGATTTCAGGAGTATGGTACTCTATGGAGGCCAGAGATA 351
 Db 301 GACCTTGAGCTGCAATCAACATTTAACACCCGATAAACATGATACTGAT 360
 Qy 352 GATGGTGATATAACAAAAAGAGCATTACAGAGTATGGTACTCTATGGAGGCCAGAGATA 291
 Db 361 GACCTTGAGCTGCAATCAACATTTAACACCCGATAAACATGATACTGAT 360
 Qy 412 AATGGTGAAATCTATAACATTTCGCAATTCTCGTAAGAGTGCATGAAATGCAAGAA 471
 Db 421 AGGGTGACTCTATAAACTTGGACTATCTCGTGAAAGCCAAATGCAAGAA 480
 Qy 472 TATGTAATGACTTAAATGCGGATAACTTTATGTCATGTTAAATCTTGTAT 531
 Db 481 TATGTTGTCCTTAAATGAGGCTCATCTTTATGTCATTAATGTTAAACTTGTAT 540
 Qy 532 GACATTAGCTGAGGACTATCTTCGTCACATGTCAGGTAGGAGAGCAT 591
 Db 541 GACATTACAGCTGAGGGACTATCTTCGTCACATGTCAGGTAGGAGAGCAT 600
 Qy 592 CTTATCACTTAAATGAGGCTCAATCTAAATTGCTTACCAAGGGAAAATAGGTATT 651
 Db 601 CTTATAAACGTTAAATGAGGTTAAATTCTCATACCAAGGGAAAATAGGTATT 660
 Qy 712 GGTAAATAATTTGAGAAGATACTCTGTAATAACTCTGTAGTAAATGTCCTCAA 771
 Db 721 GGAATAATTAAACAAATACCTGTAATAACCTGTTACACTGTAGTAAATGGAGCTCAA 780
 Qy 772 ACCACATCTGCTCAGTAACCTCTGACGTGTTGAGTACTCTGGCGGAGAAATGGAAATGG 831
 Db 781 AACACATCTGCGCTGAGTAACTGACATGGTACCTCCGGAGGTAAAGTGGTAAGG 840
 Qy 832 TTACCCCTTC 840

RESULT 15
US-10-138-162-48
; Sequence 48, Application US/10138162
; Publication No US20050170341A1
; GENERAL INFORMATION:
; APPLICANT: RIKHTSA, YASUKO
; TITLE OF INVENTION: METHOD FOR DETECTING EHRLICHIA CANIS AND EHRLICHIA
; CHAFFEENSIS IN VERTEBRATE AND INVERTEBRATE HOSTS
; FILE REFERENCE: 22/22/04/121
; CURRENT APPLICATION NUMBER: US/10/138,162
; PRIORITY FILING DATE: 2002-05-02
; PRIOR FILING DATE: 2000-08-25
; NUMBER OF SEQ ID NOS: 51
; SOFTWARE: PatentIn Ver. 3.2
; SEQ ID NO 49
; LENGTH: 849
; TYPE: DNA
; ORGANISM: Ehrlichia chaffeensis
; US-10-138-162-48

Query Match Similarity 29.0%; Score 243.4; DB 22; Length 849;
Best Local Similarity 52.3%; Pred. No. 1.e-42;
Matches 447; Conservative 77; Mismatches 307; Indels 24; Gaps 4;

Qy 1 ATGATTATAAGAAAATCTGAAGAAGCGCTTAATCTCAATTAACTTACCA 60
Db 1 ATGATTATAAGAAAATCTGAAGAAGCGCTTAATCTCAATTAACTTACCA 60

Qy 61 TATCAGTCTTGGAGATCCTAGGTCAAGAACATAATGATAACAAAGCTCTAC 120
Db 61 GGAGTATCATTTGACGCCARCAAGGTGTTGGATTACGGYAT-----TCAY 111

Qy 121 ATTAGTGCAAAGTACAATCCAAGTATATCACACTTAACTTCTCTGCT---GAAGAA 177
Db 112 ATCAGTGGAAATAATYATGCCAAAGCATTACAGAGTAGCTCCAGGCAATTGCTAAGGAA 171

Qy 178 ACTCTTAAATGAAACAAATTCTCACTAAAGTTCCGACTAAAGAAAGATGGT 237
Db 172 AGAARTACACAGTGGAGTRTTGGATGAACARATGGGAYGMAGYCAATAYCY 231

Qy 238 GATATAACAAAAAAAGCATTACAGAGTAGCTCCAGGCAATTGATTCAAATAAC 297
Db 232 MACYCHMNMWSRHMVTYATTYACTGTYTCAAATYATTCRRTTAATATGAAAYA 291

Qy 298 TTAAATATCAGGATTTCAGGAAGTATTGCTTACTCTATGGACGCCAAGAATAGAACCT 357
Db 292 CCRTTYYTGGWTTGCAAGGAGPATGGYACTCAATGATGGCYYCAAGTAGCTT 351

Qy 358 GAAGCTGCATATCACAAATTAACTCAAAACACCGATAACATGATAATGGT 417
Db 352 GAACTATCTATGARACATTGWTAAAATCAAGSTAACARYTAYAAGAYGAGCD 411

Qy 418 GAATACATPAAACATTGCACTTATCTCGTAAAGATCACA-----ATGGAAGATCAG 468
Db 412 CATAGRATGTCVTPATCYCRTMASRSYCARBARCARRCATGMSKAGTCARRAT 471

Qy 469 CAATATSTAGTACTTAAAAATGACGGCATAACTTTATGTCATTGATGGTTAATACTTGC 528
Db 472 AMWTTGTYTTCTCAAAAATGAAGGRTYACTTGACTRATCRTCYTATGCTGACGCTGC 531

Qy 529 TATGACATTACAGTGAGGAGTATCTGACCATATGATGTCAGGTATAGGAGCA 588
Db 532 TATGAYGTATARGYGAAGMMATACCTTTCTCCTPAYATATGYGYAGPATGGACT 591

Qy 589 GATCTTATCAGTCACTATTTAAAGACCTCAATCTAAATTGCTTACCAAGGAAAATGGT 648
Db 592 GATTAGTATCCATGTTGAAAGTAAAYCTTAAATTCTTACCAAGGAAAGTTAGGT 651

Qy 649 ATTAGTACCCATACACCAGAACGTCCTGCATTATTGGTGGATACATCATGGGGT 708
Db 652 TTAAGCTACTCTATAACCCAGAACRTCTGTSITTRTYGGGRCAATTYCATAAGCTR 711

Qy 709 ATGGTATAATTGGAGAGATAACCTGTAATAACTCTCTGTTGATTAATGTCCT 768
Db 712 ATRGGRAAGGATTAGAGATATTCCPRCTTAACCTATVGGATCAASNTTGCAGGA 771

Qy 769 CAA---ACCACATCTGCTTCACTAATCTGAGTTGGATACTTGGGAAATGGA 825
Db 772 AMAGGRAYAACCTGAAATGAACTTACRGTGATGCTACCTTGCCTGTTG 831

Qy 826 ATGAGGTTCACCTTC 840
Db 832 CGAAGRTTGCCTTC 846

Search completed: August 30, 2005, 14:59:58
Job time : 653 secs

GenCore version 5.1.6
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OM nucleic - nucleic search, using sw model

Run on: August 29, 2005, 18:04:14 ; Search time 1467 Seconds

(without alignments)
 936.927 Million cell updates/sec

Title: US-10-680-349-41

Perfect score: 840

Sequence: 1 atgaatataaagaattct.....ttggaatgagggttccacottc 840

Scoring table: IDENTITY_NUC

Gapop 10.0 , Gapext 1.0

Searched: 1202784 seqs, 81838359 residues

Total number of hits satisfying chosen parameters: 2405568

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued_Patents_NA.*

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 2: /cgns_6/_podata/1/ina/5B_COMB.seq.*
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 5: /cgns_6/_podata/1/ina/PEUT_COMB.seq.*
 6: /cgns_6/_podata/1/in/backfile1.seq.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	840	100.0	840	3 US-09-660-587-41	Sequence 41, Appl
2	840	100.0	840	4 US-09-811-007A-41	Sequence 41, Appl
3	840	100.0	843	4 US-09-314-701-47	Sequence 47, Appl
4	598	67.3	852	4 US-09-314-001-3	Sequence 3, Appl
5	243	42.0	849	3 US-09-648-520E-48	Sequence 48, Appl
6	238	28.4	924	4 US-09-314-701-35	Sequence 35, Appl
7	238	28.4	1607	3 US-09-660-587-1	Sequence 1, Appl
8	238	28.4	1607	3 US-09-261-258A-1	Sequence 47, Appl
9	238	28.4	1607	3 US-09-648-520B-47	Sequence 1, Appl
10	238	28.4	1607	3 US-09-201-058-1	Sequence 1, Appl
11	238	28.4	1607	4 US-09-811-007A-1	Sequence 1, Appl
12	234	27.9	840	3 US-09-660-587-5	Sequence 5, Appl
13	228	27.9	840	4 US-09-261-258A-5	Sequence 5, Appl
14	234	27.9	840	4 US-09-811-007A-5	Sequence 5, Appl
15	232	27.4	843	4 US-09-314-701-37	Sequence 37, Appl
16	232	27.4	846	4 US-09-314-001-1	Sequence 1, Appl
17	228	27.2	830	3 US-09-953-226-11	Sequence 11, Appl
18	228	27.2	830	4 US-09-553-662-11	Sequence 11, Appl
19	228	27.2	830	4 US-10-062-994-11	Sequence 11, Appl
20	217	25.9	867	4 US-09-314-001-31	Sequence 31, Appl
21	212	25.3	861	3 US-08-953-326-8	Sequence 7, Appl
22	212	25.3	861	4 US-09-314-001-7	Sequence 8, Appl
23	212	25.3	861	4 US-09-553-662-8	Sequence 8, Appl
24	212	25.3	861	4 US-10-062-994-8	Sequence 8, Appl
25	207	24.7	843	4 US-08-953-326-10	Sequence 10, Appl
26	207	24.7	843	4 US-09-314-001-11	Sequence 11, Appl
27	207	24.7	843	4 US-09-553-662-10	Sequence 10, Appl

ALIGNMENTS

RESULT 1					
US-09-660-587-41	Sequence 41, Appl	Patent No. 6392023	GENERAL INFORMATION:		
			APPLICANT: Walker, David H.		
			APPLICANT: McBride, Jere W.		
			TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein of Ehrlichia canis and Uses Thereof		
			TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof		
			FILE REFERENCE: D6152CIP2		
			CURRENT APPLICATION NUMBER: US/09/660 , 587		
			CURRENT FILING DATE: 2000-09-12		
			PRIOR APPLICATION NUMBER: 09/261,358		
			PRIOR FILING DATE: 1999-03-03		
			SEQ ID NO: 46		
			LENGTH: 840		
			TYPE: DNA		
			FEATURE: OTHER INFORMATION: nucleic acid sequence of <i>E. canis</i> p28-2		
			ORGANISM: <i>Ehrlichia canis</i>		
			US-09-660-587-41		

Db	301	ATATCAGGATTTCTAGGAAGTATGGTTACTCTATGGACGGACCAAGATAAACACTTGAA	360	Db	121	ATTAGTCAAAGTACATCCAAAGTATPATCACATTAGAAATTCTGCTGAAGAACT 1.80	
Qy	361	GCTGCATATACAAATTATCCAAAAAACACCCATTACACATGATACTGAAATGGTCAA	420	Qy	181	CCTTATPATGGRACAAATTCTCCTCATAAAANAGTTTTCGCACTAAAGAAGATGGCAT 240	
Db	361	GCTGCATATACAAATTATCCAAAAAACACCCATTACACATGATACTGAAATGGTCAA	420	Db	181	CCTTATPATGGRACAAATTCTCCTCATAAAAGTTTTCGCACTAAAGAAGATGGCAT 240	
Db	421	TACATAAACATTTGCAATTATCGTAIAAGATGCAATGCCAATATGTGATA	480	Qy	241	ATAACAAAAGAACGGATTTCAGAAGTAGTCCAGCGATTTCAAAATAACTTA 3.00	
Qy	421	TACATAAACATTTGCAATTATCGTAIAAGATGCAATGCCAATATGTGATA	480	Db	241	ATAACAAAAGAACGGATTTCAGAAGTAGTCCAGCGATTTCAAAATAACTTA 3.00	
Db	481	CITAAAATGACGGCATACCTTTATGCAATGGTTAATCTGGTACATTACA	540	Qy	301	ATATCAGGATTTTCGGAAGTATGGTACTCTGGACGGCACCACAAATGAACTTGAA 3.60	
Qy	481	CITAAAATGACGGCATACCTTTATGCAATGGTTAATCTGGTACATTACA	540	Db	301	ATATCAGGATTTTCGGAAGTATGGTACTCTGGACGGCACCACAAATGAACTTGAA 3.60	
Qy	541	GCTGAAGGAGTATCTTCTACATATGCAATGCTGATGCTGATGGCAATTTACT	600	Qy	361	GCTGCATATACAAATTAACTCAAAACACCATAACATGATACTGAAATGCTGAA 4.20	
Db	541	GCTGAAGGAGTATCTTCTACATATGCAATGCTGATGCTGATGGCAATTTACT	600	Db	361	GCTGCATATACAAATTAACTCAAAACACCATAACATGATACTGAAATGCTGAA 4.20	
Qy	601	ATTTTAAGAACCTCAATCTAAATTGCTTACCAAGGAAAATAGGTATAGTTACCT	660	Qy	421	TACTATTAACATTGGATTATCTGTAAGATGCAATGGGAGATCGCAATATGPTGA 4.80	
Db	601	ATTTTAAGAACCTCAATCTAAATTGCTTACCAAGGAAAATAGGTATAGTTACCT	660	Db	421	TACTATTAACATTGGATTATCTGTAAGATGCAATGGGAGATCGCAATATGPTGA 4.80	
Qy	661	ATCAACCCGAAAGTCTCCTCATTATTGGATACTACCATGGCCTTATGGTAA	720	Qy	481	CITAAAATGACGGCATACCTTTCTGACCATGCTGAGGTAGAGGAGAGATCTTACT 5.40	
Db	661	ATCAACCCGAAAGTCTCCTCATTATTGGATACTACCATGGCCTTATGGTAA	720	Db	481	CITAAAATGACGGCATACCTTTCTGACCATGCTGAGGTAGAGGAGAGATCTTACT 5.40	
Qy	721	TITTGAGAAGTACCTGTATAACTCCCTGTAATTAAATGATGCTCTCAACCACATC	780	Qy	541	GCTGAAGGAGTATCTTCTGACCATGCTGAGGTAGAGGAGAGATCTTACT 6.00	
Db	721	TITTGAGAAGTACCTGTATAACTCCCTGTAATTAAATGATGCTCTCAACCACATC	780	Db	541	GCTGAAGGAGTATCTTCTGACCATGCTGAGGTAGAGGAGAGATCTTACT 6.00	
Qy	781	GCTTCAGTAACTCTGACCTGGATACTCTGGGGAGAAATCGAATCAGGTTACCTTC	840	Qy	601	ATTTTAAGAACCTCAATCTAAATTGCTTACCAAGGAAAATAGSTTATAGTTACCT 6.60	
Db	781	GCTTCAGTAACTCTGACCTGGATACTCTGGGGAGAAATCGAATCAGGTTACCTTC	840	Db	601	ATTTTAAGAACCTCAATCTAAATTGCTTACCAAGGAAAATAGSTTATAGTTACCT 6.60	
Qy	661	ATOCACCAAGTCTGCAATTGGTCACTACCATGGCTTATGGTAAATA 7.20		Qy	661	ATOCACCAAGTCTGCAATTGGTCACTACCATGGCTTATGGTAAATA 7.20	
Db	661	ATOCACCAAGTCTGCAATTGGTCACTACCATGGCTTATGGTAAATA 7.20		Db	661	ATOCACCAAGTCTGCAATTGGTCACTACCATGGCTTATGGTAAATA 7.20	
Qy	721	TITTGAGAAGATACCTGTATAACTCTGCTGATGCTCTCAACCACATCT 780		Qy	721	TITTGAGAAGATACCTGTATAACTCTGCTGATGCTCTCAACCACATCT 780	
Db	721	TITTGAGAAGATACCTGTATAACTCTGCTGATGCTCTCAACCACATCT 780		Db	721	TITTGAGAAGATACCTGTATAACTCTGCTGATGCTCTCAACCACATCT 780	
Qy	781	GCTTCAGTAACCTCTGACCTGGATACTCTGGGGAGAAATCGAATCAGGTTACCTTC	840	Qy	781	GCTTCAGTAACCTCTGACCTGGATACTCTGGGGAGAAATCGAATCAGGTTACCTTC	840
Db	781	GCTTCAGTAACCTCTGACCTGGATACTCTGGGGAGAAATCGAATCAGGTTACCTTC	840	Db	781	GCTTCAGTAACCTCTGACCTGGATACTCTGGGGAGAAATCGAATCAGGTTACCTTC	840
RESULT 2							
US-09-811-007A-41							
; Sequence 41, Application US/09811007A							
; Patent No. 660669							
GENERAL INFORMATION:							
; APPLICANT: Walker, David H.							
; APPLICANT: McBride, Jere W.							
; APPLICANT: Yu, Xue-Jie							
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein							
; TITLE OF INVENTION: Genes of <i>Ehrlichia canis</i> and Uses Thereof							
; FILE REFERENCE: D6152.CIP2							
; CURRENT APPLICATION NUMBER: US/09/811,007A							
; CURRENT FILING DATE: 2001-10-23							
; PRIOR APPLICATION NUMBER: 09/660,587							
; PRIOR FILING DATE: 2000-09-12							
; NUMBER OF SEQ ID NOs: 46							
; SEQ ID NO: 41							
; LENGTH: 840							
; TYPE: DNA							
; ORGANISM: <i>Ehrlichia canis</i>							
; FEATURE: OTHER INFORMATION: nucleic acid sequence of <i>E. canis</i> p28-2							
US-09-811-007A-41							
Query Match Score 100.0%; DB 4; Length 840;							
Best Local Similarity 100.0%; Pred. No. 1..1e-211; Indels 0; Gaps 0;							
Matches 840; Conservative 0; Mismatches 0; Gaps 0;							
; QUERY ID: US-09-314-701-47							
; Sequence 47, Application US/09314701							
; Patent No. 6544517							
; GENERAL INFORMATION:							
; APPLICANT: Rikihisa, Yabuko							
; APPLICANT: Ohasi, No. 6544517;io							
; TITLE OF INVENTION: Outer Membrane Protein of <i>Ehrlichia canis</i> and <i>Ehrlichia</i>							
; TITLE OF INVENTION: Chaffeensis							
; FILE REFERENCE: 22727/04021							
; CURRENT APPLICATION NUMBER: US/09/314,701							
; CURRENT FILING DATE: 1999-05-19							
; NUMBER OF SEQ ID NOs: 66							
; SOFTWARE: PatentIn Ver. 2.0							
; SEQ ID NO: 47							
; LENGTH: 843							
; TYPE: DNA							
; ORGANISM: <i>Ehrlichia canis</i>							
; FEATURE: CDS							
; NAME/KEY: ;							
; LOCUS: ;							
; OTHER INFORMATION: ;							
; SEQ ID NO: 1							
; LENGTH: 840							
; TYPE: DNA							
; ORGANISM: <i>Ehrlichia canis</i>							
; FEATURE: OTHER INFORMATION: ;							
; SEQ ID NO: 1							
; LENGTH: 840							
; TYPE: DNA							
; ORGANISM: <i>Ehrlichia canis</i>							
; FEATURE: OTHER INFORMATION: ;							
; SEQ ID NO: 1							
; LENGTH: 840							
; TYPE: DNA							
; ORGANISM: <i>Ehrlichia canis</i>							
; FEATURE: OTHER INFORMATION: ;							
; SEQ ID NO: 1							
; LENGTH: 840							
; TYPE: DNA							
; ORGANISM: <i>Ehrlichia canis</i>							
; FEATURE: OTHER INFORMATION: ;							
; SEQ ID NO: 1							
; LENGTH: 840							
; TYPE: DNA							
; ORGANISM: <i>Ehrlichia canis</i>							
; FEATURE: OTHER INFORMATION: ;							
; SEQ ID NO: 1							
; LENGTH: 840							
; TYPE: DNA							
; ORGANISM: <i>Ehrlichia canis</i>							
; FEATURE: OTHER INFORMATION: ;							
; SEQ ID NO: 1							
; LENGTH: 840							
; TYPE: DNA							
; ORGANISM: <i>Ehrlichia canis</i>							
; FEATURE: OTHER INFORMATION: ;							
; SEQ ID NO: 1							
; LENGTH: 840							
; TYPE: DNA							
; ORGANISM: <i>Ehrlichia canis</i>							
; FEATURE: OTHER INFORMATION: ;							
; SEQ ID NO: 1							
; LENGTH: 840							
; TYPE: DNA							
; ORGANISM: <i>Ehrlichia canis</i>							
; FEATURE: OTHER INFORMATION: ;							
; SEQ ID NO: 1							
; LENGTH: 840							
; TYPE: DNA							
; ORGANISM: <i>Ehrlichia canis</i>							
; FEATURE: OTHER INFORMATION: ;							
; SEQ ID NO: 1							
; LENGTH: 840							
; TYPE: DNA							
; ORGANISM: <i>Ehrlichia canis</i>							
; FEATURE: OTHER INFORMATION: ;							
; SEQ ID NO: 1							
; LENGTH: 840							
; TYPE: DNA							
; ORGANISM: <i>Ehrlichia canis</i>							
; FEATURE: OTHER INFORMATION: ;							
; SEQ ID NO: 1							
; LENGTH: 840							
; TYPE: DNA							

RESULT 5										
US-09-648-520E-48										
; Sequence 48 , Application US/09648520E										
; Patent No. 642649										
; GENERAL INFORMATION:										
; APPLICANT: Sich, Roger W.										
; APPLICANT: Rikitisa, Yasuko										
; TITLE OF INVENTION: Methods for Detecting Ehrlichia Canis and Ehrlichia Chaffeensis										
; FILE REFERENCE: 22727/04069										
; CURRENT APPLICATION NUMBER: US/09/648,520E										
; NUMBER OF SEQ ID NOS: 51										
; SOFTWARE: PatentIn version 3.1										
; SEQ ID NO: 48										
; LENGTH: 849										
; TYPE: DNA										
; ORGANISM: ORF sequence, Ehrlichia chaffeensis p28										
; US-09-648-520E-48										
Query Match Score 243.4 ; DB 3 ; Length 849 ;										
Best Local Similarity 52.3% ; Pred. No. 1.0e-54 ;										
Matches 447 ; Conservative 77; Mismatches 307; Indels 24; Gaps 4;										
Qy	1	ATGAAATTAGAAGAAAATTCTTAAGTAAAGCGCTTAATCTCATTAAATCTCAATCTTACCA	60	Db	1	TATCAGTCCTTTGCAGATCCTGTAGGTTCAAGAACATAATGATAACAAAGAGGCTCTCAC	120	Qy	1	
Qy	1	ATGAAATTACAAAGAAAAGTTTCAAACTAACAGTGTGATTGATATCATTAATATCTCTCTACCT	60	Db	61	61 GGGAGTATATTTCYGACCACARGGTATGCGATTACGTYAAT-----TCTPAY 111	61	Db	61 ATGAAATTAGAAGAAAATTCTTAGAATTCTCTCGT-----GAAGAA 177	61
Qy	121	ATTAGTGCAGAAGTACAATTCAGAAGTATACACATTAGAAATTCTCTCGT-----GAAGAA 177	121	Db	112	112 ATCAGTGAAAATAYATGCCAAGYCGTCATTTGGRTRTTCTCGCTAAGGAA 171	112	Db	121 ATTAGCAGAAGTACAATTCAGAAGTATACACATTAGAAATTCTCTCGTGAAGA-AA 178	121
Qy	178	ACTCCCTTAAATGAAACAAATTCTCTCAACTAAAAAGTTTCGACTAAAGAAAGATGT 237	178	Db	172	172 AGAARTAACACAGTGTGGATTTGGTGAAGCAARATTGGAYGMAGYGRATACY 231	172	Db	172 AGAARTAACACAGTGTGGATTTGGTGAAGCAARATTGGAYGMAGYGRATACY 231	172
Qy	238	GATAAAACAAAAAAAGAGGTTTACAAGAGTGTCCAGGGATTGATTTCATAAAATAC	297	Db	232	232 MACWCYHNMSPAHRTVYATTYACTCTYTCAAAYTAYTCRITTAATATGAAAYAT 291	232	Db	232 MACWCYHNMSPAHRTVYATTYACTCTYTCAAAYTAYTCRITTAATATGAAAYAT 291	232
Qy	298	TTAATATCAGGATTTCAGGAAGTATGTTACTCTATGGACGCCAGAACTAGAACCT	357	Db	298	298 TTAAATCAGGATTTCAGGAAGTATGTTACTCTATGGACGCCAGAACTAGAACCT	357	Db	298 TTAAATCAGGATTTCAGGAAGTATGTTACTCTATGGACGCCAGAACTAGAACCT	357
Qy	299	CCTTTTGTAGGTTTCAGGAGCTATGCGTGTGTTGGTGTGTTGGTGTGTTGGTGTG	351	Db	299	299 CCTTTTGTAGGTTTCAGGAGCTATGCGTGTGTTGGTGTGTTGGTGTGTTGGTGTG	351	Db	299 CCTTTTGTAGGTTTCAGGAGCTATGCGTGTGTTGGTGTGTTGGTGTGTTGGTGTG	351
Qy	358	GAAGCTGATTCACAAATTAACTCCAAAAAAACCGGATAACATGATAATGTT 417	358	Db	352	352 GAAGTGTCTTGTGATCAGATTTGATGTTGAAATACTCAAGGTTACARYTAVAAAGAAGGCD 411	352	Db	352 GAAGTGTCTTGTGATCAGATTTGATGTTGAAATACTCAAGGTTACARYTAVAAAGAAGGCD 411	352
Qy	418	GAATACATAAACATTGTCATPATCCTGTAAGATGCA-----ATGGAAAGATGCA	468	Db	412	412 CATAGTGTCTTGTCTTGTGATGWSKAGTGCARRTTAT 471	412	Db	412 CATAGTGTCTTGTCTTGTGATGWSKAGTGCARRTTAT 471	412
Qy	469	CAATATGTTGAGTAAATGAGGCTATACTTTGTGATGTTAATACTTGC	528	Db	472	472 ANWTTGTTGTTCTTAAATGAGGRTTACCTGACRTATCRITYATGTCAGGCATGC	531	Db	472 ANWTTGTTGTTCTTAAATGAGGRTTACCTGACRTATCRITYATGTCAGGCATGC	531
Qy	529	TATGACATTACAGCTGAAAGGATPATCTTCTGACCATATGCACTGCAAGGTTAGGGCA	588	Db	532	532 TATGATGTTGTTCTTAAATGAGGRTTACCTGACRTATCRITYATGTCAGGCATGC	591	Db	532 TATGATGTTGTTCTTAAATGAGGRTTACCTGACRTATCRITYATGTCAGGCATGC	591
Qy	589	GATCTTATCAGTATTAAAGACCTCTAACATCTAACAGGAAATAATAGT	648	Db	592	592 GATTTAGTATCCATTGTTGAAGTACAAAYCTTAAATCTTACCAAGGAAGTACTGT	651	Db	592 GATTTAGTATCCATTGTTGAAGTACAAAYCTTAAATCTTACCAAGGAAGTACTGT	651
Qy	649	ATTAGTACCTPATCAGCAGAGTACCTGTTGAGTACATCTGCAAGTGTGCTT	708	Db	650	650 ACAGGTACTGGCTCTPATCAGCAGCTATGGTCAATTTGCT	711	Db	650 ACAGGTACTGGCTCTPATCAGCAGCTATGGTCAATTTGCT	711
Qy	652	TPAAGCTACTPATTAAGCCAGAARCTCTGTSITTRYYGYGRCAYTVCATAAGGTR	768	Qy	652	652 TPAAGCTACTPATTAAGCCAGAARCTCTGTSITTRYYGYGRCAYTVCATAAGGTR	768	Qy	652 TPAAGCTACTPATTAAGCCAGAARCTCTGTSITTRYYGYGRCAYTVCATAAGGTR	768
Qy	709	TACTTAAATAATTGAGAAGTACCTGTTAAATACCTCTGTTAGTAAATGATGCTCC	771	Qy	709 TACTTAAATAATTGAGAAGTACCTGTTAAATACCTCTGTTAGTAAATGATGCTCC	771	Qy	709 TACTTAAATAATTGAGAAGTACCTGTTAAATACCTCTGTTAGTAAATGATGCTCC	771	

SEQ ID NO 47
LENGTH: 1607
TYPE: DNA
ORGANISM: JAKE strain, Ehrlichia canis p30
US-09-648-520E-47

	Query Match	Score 238.4; DB 3; Length 1607;
Db	Best Local Similarity 57.7%; Pred. No. 4.9e-52;	Matches 486; Conservative 0; Mismatches 346; Indels 10; Gaps 3;
Qy	1 ATGAAATTATAAAGAAATTCTAGTAAGAGCTTCAAGAAACTAAATGATCATTAATGTCATCTTAC 205	
Db	206 AGCATATCCTTTGGAGATCCTGTAGGTTCAGAGAAACTAAATGATCATACAGGAACTTCTAC 120	
Qy	121 ATTAGTGCAGTACAATCCAACTATACAACTTCTAGAAATTCTCTGTGAGA - AA 178	
Db	260 ATTAGTGCAGTACAATCCAACTATACAACTTCTAGGTAACTGCTTCAGCTAAAGAGAA 319	
Qy	179 CTCCCTAAATGGACAAATTCTCTCACTAAAGGTTTCGACTAAAGAAAGATGGT 238	
Db	320 AGCCAATTCACACTGTTGGACTTTGGATTAACATGATTGGATGAAAGTCCAACT- 378	
Qy	239 ATATAACAAAAGAGACGATTACAAAGGATGTTACAGGCAATTGACTTCAAATAACT 298	
Db	379 -TAGAAATAACACCGTCAACTTACGGTCAAGATAAGAACATC 437	
Qy	299 TAATATCAGGATTTCAGGAAGTATTGGTTACTCTATGACGGGACCAAGATAAGACTTG 358	
Db	438 CATTTCCTAGTTGGCAGAACTGTTACTCAATGGTGGCCCAAGATAAGAAATTCTG 497	
Qy	359 AAGCTGCATAATCACAAATTAACTCAAAAACACCGATAACAAATGATGATAATGCTG 418	
Db	498 AAATATCTTGTGAGCATTCGCTTAAAGTCTTAAATATCATTAAATGACCGCG 557	
Qy	419 AATACTATAACATTTCGATTATCTCGATAAGATGCAATGCAATATGCTAG 478	
Db	558 ACAGTACTCGGCCCTATCTCATCACACATGGAGGCTATGATTAATTGCT 617	
Qy	479 TACTTAAATGAGGCATAACTTTATGCTATGATGTTAACTCTGTTATGACATTA 538	
Db	618 TCTPRAAAAGCAGGGTTAATTGACATCACATTCGAAATAAATGCTATGTTATGATAAA 677	
Qy	539 CAGETGAAGGATCTCTGACCTATGCTAGTGCGAGTATAGGACGAGATCTTATCA 598	
Db	678 TAATGACAAGACTTACCTGTTCTCCRTATATGCGGAGGTATTGGTACTGATTGATT 737	
Qy	599 CTATTTAAAGACCTCAATCTAAATTGCTACCTGTTATGGTAAATA 658	
Db	738 CTATGTTGAAGCTACAAGTCTCCCTTATATGCGCAGGTATGGTACTGATTGATT 797	
Qy	659 CTAICACACAGAAGTCTCTGCATTATTGCTGTTATGGCTTATGGTAAATA 718	
Db	798 CTATTAATCGGAAACCTCTGTTCTGTCAGGATCAGGTATG 857	
Qy	719 AATTGAGAGATACTCTGTTATAACTCTGTAGTTAAATGATGTGCTCTCAACCACAT 778	
Db	858 AGTTTAGATGATTCCTGCAATGACTACCTGTAACTCAACTGAAATAGGGGCCAACAT 917	
Qy	779 CTGCTTCAGTAACCTGAGCTGGATACTTGGCGGAGAAATTGGATGAGGTTCACCT 838	
Db	918 TTGCAACAGTAACTAATGTTGTCACTTGTGTTAGAACTGGAGATTAACT 977	
Qy	839 TC 840	
Db	978 TC 979	
Qy	719 ATTGAGAGATACTCTGTTATAACTCTGTAGTTAAATGATGTGCTCTCAACCACAT 778	
Db	858 AGTTTAGATGATTCCTGCAATGACTACCTGTAACTCAACTGAAATGGGCCAACAT 917	
Qy	779 CTGCTTCAGTAACCTGAGCTGGATACTTGGCGGAGAAATTGGATGAGGTTCACCT 838	
Db	918 TTGCAACAGTAACTAATGTTGTCACTTGTGTTAGAACTGGAGATTAACT 977	
RESULT 9 US-09-648-520E-47		
Sequence 47, Application US/096-8520E		
Patent No. 6432649		
GENERAL INFORMATION:		
APPLICANT: Stich, Roger W.		
APPLICANT: Rikihisa, Yasuko		
TITLE OF INVENTION: Methods for Detecting Ehrlichia Canis and Ehrlichia Chaffeensis		
FILE REFERENCE: 2272/04069		
CURRENT APPLICATION NUMBER: US/09/648,520E		
CURRENT FILING DATE: 2000-08-25		
NUMBER OF SEQ ID NOS: 51		
SOFTWARE: Patentin version 3.1		
RESULT 10 US-09-201-458-1		

Sequence 1, Application US/09201458A
; Patent No. 658942
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: 28-kDa Immunoreactive Protein Gene of Ehrlichia
; TITLE OF INVENTION: Canis and Uses Thereof
; FILE REFERENCE: D6152
; CURRENT FILING DATE: 1998-11-30
; NUMBER OF SEQ ID NOS: 21
; SEQ ID NO 1
; LENGTH: 1607
; TYPE: DNA
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: nucleic acid sequence of a gene encoding a 30 kDa
; OTHER INFORMATION: immunoreactive protein of Ehrlichia canis
US-09-201-458-1

Query Match Score 238.4; DB 3; Length 1607;
Best Local Similarity 57.7%; Pred. No. 4.9e-53;
Matches 486; Conservative 0; Mismatches 346; Indels 10; Gaps 3;

Qy 1 ATGAAATTATAAGAAAATTCTAGTAAAGAACCGCTTAATCTCATTAATGTCATCTTACCA 60
Db 146 ATGAATTGCAAAAAAATTCTTATACAATCTGCAATGTTAATCTCATTAATGTCATCTTACCA 205
Qy 61 TATCAGCTTCTTGCAGATCTCTGAGATCTCTGAGACTTAAGATAACAAAGAGCTCTPAC 120
Db 206 AGCATATCTTCTGATACATATAAGATGTAAACATGGTTAACATGGTGTAA-----CTTCPAT 259
Qy 121 ATTAGTGCAAGTAAATCAATCAAAGTATACACATTAGAAATTCTCTGCTGAGA--AA 178
Db 260 ATTAGTGCAALAGTGTACCAAGTCTCNCATTTGGTAGCTCTCAGCTAAAGAGAA 319

Qy 179 CTCCTTATTATGGAAACAATTCTCTCACAAAGAAATTCTCTGACTAAARGAAAGATGGT 238
Db 320 AGCATATCAGTGTGGATTAAATCTGATTGGTGGAGTGGCAATACT- 378

Qy 239 ATATACAAAAAAAGACGATTTACAAAGAGTAGCTCCAGGCACTGATTCTCAAATAACT 298
Db 379 -TAAGATAAAACACCGCTGACTTTACTGTTCACATGGACAACTC 437

Qy 299 TAATATCAGGATTTCAGGAGTATGGTACTCTATGAGGACCAAAATGATACTGATGGT 358
Db 438 CATTCTGGTTGCGGCTATCTCATCACATGGCTATGGTGGCCRAAGATGAAATTG 497

Qy 359 AAGCTGCATTCACAACTTAACTGCAAAAPACACCAGTAAACAATGATACTGATGGT 418
Db 498 AAATATCTTGAAGCATTGAGTAAAGTCTTAATATCAATTAAAGTCGC 557

Qy 419 AATACTATAAACATTGCAATTATTCGCTAAAGATGCAATGAGATCGCAATTATG 478
Db 558 ACAGGTACTCGCTCTATCTCATCACATGGCAAGCTGATAAAATTGCT 617

Qy 479 TACTAAATATGACGCCATACCTTTATGCTATGTTAACATGCTGACATTA 538
Db 618 TCTTAAAAGCAAGGGTTATTGACATATCAGTCAATTAATGCTATGATA 677

Qy 539 CAGCTGAAGGAGTATCTTCGTCACCATATCATGNGCAGGTATAGGAGGAGATCTTATCA 598
Db 678 TAATGCAAGTACCTGTTCTCCTTATATGGAGTTAGTGGTGAFT 737

Qy 599 CTATTTTAAGACCTCAATCTAAATTCTTACCAAGAAAATAGSTTATTAGTAC 658
Db 738 CTATGTTGAGCTAACAGTCTCCTAAATCTACCAAGAAAATCTGCTTATTAGTACT 797

Qy 659 CTATACACAGAAGTCTCGCAATTATGTTGATACTACATGGCTTATGGTAA 718
Db 798 CTATTAATCCGAAACCTCTGTTICATCGTGGCATTTCCACGGATCATGGTAA 857

Qy 719 AATTGGAGAGATACTGTAATAACTCTGTAGTATAATGATGCTCTCAAACCAT 778
Db 858 AGTTAGAGATTCCTGCAATACTGACTAAAGTGGACCT 917

Qy 779 CTGCTTCAAGTAACTCTGACGTTGATACTTGGGAGAAATTGGATGAGTTCTCCT 838
Db 918 TTGCAACACTAAACACTAAATGTTGTCATTTGTTAGAACCTGGAAAGTAACT 977

Qy 839 TC 840
Db 978 TC 979

RESULT 11
US-09-811-007A-1
; Sequence 1, Application US/09811007A
; Patent No. 6660269
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152C1P2
; CURRENT APPLICATION NUMBER: US/09/811,007A
; PRIORITY FILING DATE: 2001-09-23
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 1
; LENGTH: 1607
; TYPE: DNA
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: nucleic acid sequence of E. canis p28-7
US-09-811-007A-1

Query Match Score 238.4; DB 4; Length 1607;
Best Local Similarity 57.7%; Pred. No. 4.9e-53;
Matches 486; Conservative 0; Mismatches 346; Indels 10; Gaps 3;

Qy 1 ATGAAATTATAAGAAAATTCTAGTAAAGAACCGCTTAATCTCATTAATGTCATCTTACCA 60
Db 146 ATGAATTGCAAAAAAATTCTTATACAATCTGCAATGTTAATCTCATTAATGTCATCTTACCA 205
Qy 61 TATCAGCTTCTTGCAGATCTCTGAGATCTCTGAGACTTAAGATAACAAAGAGCTCTPAC 120
Db 206 AGCATATCTTCTGATACATATAAGATGTAAACATGGTGTAA-----CTTCPAT 259
Qy 121 ATTAGTGCAAGTAAATCAATCAAAGTATACACATTAGAAATTCTCTGCTGAGA--AA 178
Db 260 ATTAGTGCAALAGTGTACCAAGTCTCNCATTTGGTAGCTCTCAGCTAAAGAGAA 319

Qy 320 AGCATATCAGTGTGGATTAAATCTGATTGGTGGAGTGGCAATACT- 378

Qy 379 ATATACAAAGGAGTATGCAAAATGAGTAGCTCCAGGCACTGATTCTCAAATAACT 298
Db 438 CATTCTGGTTGCGGCTATCTCATCACATGGCTATGGTGGCCRAAGATGAAATTG 497

Qy 498 AAATATCTTGAAGCATTGAGTAAAGTCTTAATATCAATTAAAGTCGC 557

Qy 558 ACAGGTACTCGCTCTATCTCATCACATGGCAAGCTGATAAAATTGCT 617

Qy 618 TCTTAAAAGCAAGGGTTATTGACATATCAGTCAATTAATGCTATGATA 677

Qy 678 TAATGCAAGTACCTGTTCTCCTTATATGGAGTTAGTGGTGAFT 737

Qy 738 CTATGTTGAGCTAACAGTCTCCTAAATCTACCAAGAAAATCTGCTTATTAGTACT 797

Qy 798 CTATTAATCCGAAACCTCTGTTICATCGTGGCATTTCCACGGATCATGGTAA 857

Qy 839 AATGCTGATATCAACATTAACTCCTAAAGGAAACCCGTAACATGATAATGGT 497

Qy 858 AGCTGCTTAAAGACCTCAATCTAAATTCTTACCAAGAAAATAGSTTATTAGTAC 658
Db 918 AAATATCTTGAAGCTAACGCTTAAATCTACCAAGAAAATCTGCTTATTAGTACT 797

Qy 957 CTATGTTGAGCTAACAGTCTCCTAAATCTACCAAGAAAATCTGCTTATTAGTACT 797

Qy 978 CTATTAATCCGAAACCTCTGTTICATCGTGGCATTTCCACGGATCATGGTAA 857

Qy 999 CTATTTTAAGACCTCAATCTAAATTCTTACCAAGAAAATAGSTTATTAGTAC 658
Db 1038 CTATGTTGAGCTAACAGTCTCCTAAATCTACCAAGAAAATCTGCTTATTAGTACT 797

Qy 1079 CTATACACAGAAGTCTCGCAATTATGTTGATACTACATGGCTTATGGTAA 718

Qy 1119 CTATTAATCCGAAACCTCTGTTICATCGTGGCATTTCCACGGATCATGGTAA 857

Qy 479 TACTTAAATGACGGATACTTTATGCAATTGATGGTTAACTCTGCTATGACATTA 538
 Db 618 TCTTAAACCGAAGGGTTATGACATATGCTATGATTA 677
 Qy 539 CAGCTGAAGGAGATCCTTCGACCATATGATGATGCGATCTPATCA 598
 Db 678 TAATGACAAGTACCTGTTCTCTTATATGCGATGTTGGTACTGATTGATT 737
 Qy 599 CTATTTTAAGACCTCATCTAAATTGCTTACCAAGGAAATAGTTAGTAC 658
 Db 738 CTATGTTGAAGCTCACAGTCCCTAACATTCTAACAGGAAACTGGCATTA 797
 Qy 659 CTATCACACCGAGTCCTGCATTTGCTGATGATACTACCATGGCTTATGGTATA 718
 Db 798 CTATTAATGGAAACCTCTGGTTCATCGTGSGCCATTCCAGATCAGGTATC 857
 Qy 719 AATTGAGAGAACTGCTGATAACTCTGTACTTAAATGTCGCTCAACCCAT 778
 Db 858 AGTTAGACATTCCTGCAATAGTACCTAGTAACTACAAATAGTGACCAAT 917
 Qy 779 CTGTTTCAGTAACCTCTGAGCTGGATACTTGGCGGAGAAATTGGATGAGGTACCT 838
 Db 918 TTGCAACACTAACATAATGTCGACTTGTGTCATTGAGGATTTA 977
 Qy 839 TC 840
 Db 978 TC 979

RESULT 12
 US-0-660-587-5
 ; Sequence 5, Application US/09660587
 ; Parent No. 6392023
 ; GENERAL INFORMATION:
 ; APPLICANT: Walker, David H.
 ; APPLICANT: McBride, Jere W.
 ; APPLICANT: Yu, Xue-Jie
 ; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
 ; FILE REFERENCE: D6152CIP2
 ; CURRENT FILING NUMBER: US/09/660,587
 ; PRIOR APPLICATION NUMBER: 2000-09-12
 ; PRIOR FILING DATE: 09/16/1,358
 ; NUMBER OF SEQ ID NOS: 46

; SEQ ID NO 5

; LENGTH: 840
 ; TYPE: DNA
 ; ORGANISM: Ehrlichia canis
 ; FEATURE: mat peptide
 ; NAME/KEY: mat peptide
 ; OTHER INFORMATION: nucleic acid sequence of p28-6

US-09-660-587-5

Query Match Score 234; DB 3; Length 840;
 Best Local Similarity 59.0%; Pred. No. 5.6e-52;
 Matches 503; Conservative 0; Mismatches 325; Indels 24; Gaps 5;

Qy 1 ATGGATTATAAGAAATTCTAGTAGAAGCCGTTAACTCTTAAATCTTACCA 60
 Db 1 ATGAAATTGGCAAAAAAAATTCTTATTAACACTGCTTAAATGCTTACCA 60
 Qy 61 TATCGTCTTGGAGATCTGTAAGCTTCAAGAACATAATGATAACAAAGGCTTCTAC 120
 Db 61 AGCATATCTTCTGTACTATACAAAG - - - - -AGCATATACCTGTTCTAC 111
 Qy 121 ATTAGTGCAGAAGTACAATCCAACTGATATCAACTTCTGCTGAGA--AA 178
 Db 112 ATCAGTGGAAATAATGTCAGGTTCACTTTGGTCTCTGAGTAAAGAGAA 171
 Qy 179 CTCCATTAAATGGAAACAATTCTCACTAAAAAAGTTTCGACTAAAGAAAGATGGT 238
 Db 172 AGAAACTCAACTGTTGGACTTCTGGATAAAATGATTGGAAATGAAATCT 231

RESULT 13
 US-09-261-358A-5
 ; Sequence 5, Application US/09261358A
 ; GENERAL INFORMATION:
 ; APPLICANT: Walker, David H.
 ; APPLICANT: McBride, Jere W.
 ; APPLICANT: Yu, Xue-Jie
 ; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
 ; TITLE OF INVENTION: Genes of Enrichia canis and Uses Thereof
 ; FILE REFERENCE: D6152CIP
 ; CURRENT APPLICATION NUMBER: US/09/261,358A
 ; CURRENT FILING DATE: 1999-03-03
 ; PRIOR APPLICATION NUMBER: 09/201,458
 ; PRIOR FILING DATE: 1998-11-30
 ; NUMBER OF SEQ ID NOS: 33
 ; SEQ ID NO 5

; LENGTH: 840
 ; TYPE: DNA
 ; ORGANISM: Ehrlichia canis
 ; FEATURE:
 ; NAME/KEY: mat peptide
 ; OTHER INFORMATION: nucleic acid sequence of EC28SA3

Query Match Score 234; DB 3; Length 840;
 Best Local Similarity 59.0%; Pred. No. 5.6e-52;

FILE REFERENCE: D6152CIP2
 CURRENT APPLICATION NUMBER: US/09/811,007A
 CURRENT FILING DATE: 2001-10-23
 PRIORITY APPLICATION NUMBER: 2000-09-12
 PRIORITY FILING DATE: 2000-09-12
 SEQ ID NO: 5
 LENGTH: 840
 TYPE: DNA
 ORGANISM: Ehrlichia canis
 FEATURE:
 NAME/KEY: mat_peptide
 OTHER INFORMATION: nucleic acid sequence of p28-6
 US-09-811-007A-5

Matches	503 ; Conservative	0 ; Mismatches	325 ; Indels	24 ; Gaps	5 ;
Qy	1 ATGAAATTAAAGAAAATTCTTAGTAAAGGGCGTTAATCTCATTAATGTCATACTTACCA	60			
Db	1 ATGAAATTGCAAAAAATTCTTATAACAACGTGCAATTAACTGTCATACTTACCA	60			
Qy	61 TATCAGTCTTGGAGATCTGTAGGTTAAGAACATAATGATAACAAGAGGCTTCTAC	120			
Db	61 AGCATATCTTTCGTACTATAACAG-----AGCATACACTGGTAGTTCTAC	111			
Qy	121 ATTAGTGCAGAAGTACAATCCAACTATCACACTTGTAGAAATTCTCTCGTGAAGA--AA	178			
Db	112 ATCAGTGAAATATGTACCAAGGTTACATTTGGTTTCTCAGCTAAGAAGA	171			
Qy	179 CTCCCTATTAAATGGACAAATTCTCCTACATPAAAAGTTTCGGACTAAAGAAAGATGGTG	238			
Db	172 AGAAACTCAACTGTGGACTTTGGATAAAACATGATTGGAACTGACATATCT	231			
Qy	239 ATATAACAAAAGAGCAGTTTACAAGAGTAGTCAGGATTGATTT-C-AAAATAAC	297			
Db	232 AACCTCTTCAGAAATATTCACAGTTCAAATTTCTGTTAAATACTGAAACAC	291			
Qy	298 TTAAATATCAGGATTTCAGGAAGTATGGTTACTCTATGACGCCAACAGAATGAACTT	357			
Db	292 CCATCTAGGGTTGAGGAGTATTCATGGTTACTCTATGACGCCAACAGAATGAACTT	351			
Qy	358 GAACTCATATCACAAATTAACTCAAAACCGATAACATGATACTGTAATGTT	417			
Db	352 GAACCTCTAACGAGACATTCTGATGTTAAATGAACTAAATTATGAAACGGGCCA	411			
Qy	418 GAACTACTATAACATTTTGCAATGCAATGCA-TG-----GAAGATGAG	468			
Db	412 CACGATACGTGCTTTATCTCATAGTCTGATGTTAAATGAACTAAATGAAAC	471			
Qy	469 CAATATGTAATCTAAAATGAGGCAATACTTTATCTCATGATGTTAAATCTG	528			
Db	472 AAATTGTTCTAAAAATGAGGGTTATGACTTAAATGAAATGATGATGC	531			
Qy	529 TATGACATTAACGCTGAGGAGATCTTGTACCATATGATGCGGTTAGGACCA	588			
Db	532 TATGACATTAATGAGGAAATGCGGATTCCTTGTACCATATGATGCGGTTAGGACCA	591			
Qy	589 GATCTTATCACTATTAAAGACCTCAATCTAAAATTGCTTACCAAGGAAATAATGGT	648			
Db	592 GATGTTGTTCCATGTTGAGGTTAAATCTTACCAAGGAAACTCTAGGA	651			
Qy	649 ATTAGTACCTCATCACCCAGAAGTCTGCACTTATGTCGATGACTCTGGCTT	708			
Db	652 TTAGGTTATGATAAGTCAAGGCTCTGTTTATGTCGACACTTCAAGAGTC	711			
Qy	709 ATGGTAATAATTGAGAGATACTCTGTTAGTAACTCTGTAGTAAATGATGCTCT	768			
Db	712 ATGGTAATGAAATTAGACATCCCTGTATGTCGATCA---ATCTTCGA	768			
Qy	769 CADACCACATCTGTTCACTAACTCTGAGGTTGAGATAATTGGGAAATGGGAATG	828			
Db	769 GAAAACCATTTGCAATGAACTTAATGTTGTCACTTGGCATGAACTGGAGA	828			
Qy	829 AGGTTCACTTC 840				
Db	829 AGATTTAACTTC 840				

RESULT 14
 US-09-811-007A-5
 Sequence 5 Application US/09/811,007A
 Patent No. 6660269
 GENERAL INFORMATION:
 APPLICANT: Walker, David H.
 APPLICANT: McBride, Jere W.
 APPLICANT: Yu, Xue-Jie
 TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
 TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
 RESULT 14
 US-09-811-007A-5
 Sequence 5 Application US/09/811,007A
 Patent No. 6660269
 GENERAL INFORMATION:
 APPLICANT: Walker, David H.
 APPLICANT: McBride, Jere W.
 APPLICANT: Yu, Xue-Jie
 TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
 TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
 769 CAARACCATCTGTTAGTAACTCTGAGGTTACCTTGGCATGAACTGGATG 828

Db 769 GAAACCAATTGCAATACTAAACRCAAATGTTGTCACITGGCATAGAACCTGGAGGA 828
 Qy 829 AGGTTCACCTC 840
 Db 829 AGATTAACTC 840

RESULT 15
 US-0-9-314-701-37
 Sequence 37, Application US/09314701
 Patent No. 654517
 GENERAL INFORMATION:
 APPLICANT: Ohashi, No. 65451710
 TITLE OF INVENTION: Outer Membrane Protein of *Ehrlichia Canis* and *Ehrlichia*
 FILE REFERENCE: 22727/04021
 CURRENT APPLICATION NUMBER: US/09/314,701
 CURRENT FILING DATE: 1999-05-19
 NUMBER OF SEQ ID NOS: 66
 SOFTWARE: PatentIn Ver. 2.0
 SEQ ID NO 37 LENGTH: 843
 TYPE: DNA
 ORGANISM: *Ehrlichia canis*
 FEATURE:
 NAME/KEY: CDS
 LOCATION: (1)..(843)

Query Match Score 232.4; DB 4; Length 843;
 Best Local Similarity 58.9%; Pred. No. 1.5e-51;
 Matches 502; Conservative 0; Mismatches 326; Indels 24; Gaps 5;

Db 1 ATGATTATAAGAAAATTCTAGTAAAGAGCGCTTAATCTCATTAAATCTCAATCTTACCA 60
 1 ATGATTGCAGAAAAAATTCTTAAACACTGCAATTAACTGCTTAAATGCTTAAATGCTATGCTTCA 60

Qy 61 TATCGATCTTTGCGAGATCTGAGGTTCAGAGAACTAAATGATAACAAAAGAGCTTCTAC 120
 Db 61 AGCATATCPTTTCTGATTAACATPACAAG-----ACGATAACACTGGTGCCTCTAC 111

Qy 121 ATTATGCGAAAGTACAATCCAACTGATATACTACACCTTAAAGAAATTCTCTGCTGAAAGA -AA 178
 Db 112 ATCGTGGAAATAATGTACAATGTCACAGTTCACATTGGTTCTCGCTAAAGAGAA 171

Qy 179 CTCCATTAAATGGACAATTCCTCAAAAGTTTGACTAAAGAGAGATGTTG 238
 Db 172 AGAACACTCACTGTTGGATTTGGATAAACATGATTGGAATGGGTACATATCT 231

Qy 239 ATATAACAAAAAAAGAGCATTACAAGAGCTTAAAGAGTAGCTCCAGGATTGATTTC-C-AAAATAAC 297
 Db 232 AACTCTTCAGAAATAATTACAGTTCAAATTTCTGTTAAATAGAAACAC 291

Qy 298 TTAAATCAGGATTTTCAGGAATGATTGTTACTCTTCTGACGCCAAAGATAAGACTT 357
 Db 292 CCATTCTTGGTTGCAAGAGCTTGTCTTAAAGATGCAATGTTCTGGTCCCAAAGATAAGACTT 351

Qy 358 GAAGCTGCMATCACAATTAACTCAAAAACACCGATAACATGATACTGATAATGTTG 417
 Db 352 GAACTCTGAGACATTCGATGTTGATGAAATCAGACATAATTAAAGAACGGGCA 411

Qy 418 GAATACTATAAACATTTCGATTATCTCGTAAAGATGCAATGTTCTGGTCAATGTTCTGGTCAATGCTTCA 468
 Db 412 CACGATACCTGCTTTATCTCATAGTCTCAGACATGTCAGTCAATGCTCAGTAC 471

Qy 469 CAATPATGTTGACTTAAATGAGCGATAACCTTATGTTCTGATGTTAAATCTG 528
 Db 472 AAATTGGTTCTCAAAATGAGGGTTATGCACTTATGATAATGATGATG 531

Qy 529 TATGACATTACAGCTGAAAGAGTATCTTGTACCATATGCACTGCGAGGATAGGAGCA 588
 Db 532 TATGACATATAATTGAAAGTACCTTATTCACCTTATTTGTGCAAGTGTGGTACT 591

Result	No.	Score	Query	Match	Length	DB	ID	Description	
1	136	100.0	280	3	US-09-660-587-42	Sequence 42, Appl		Sequence 42, Appl	RESULT 1
2	136	100.0	280	4	US-09-314-007A-15	Sequence 48, Appl		Sequence 48, Appl	
3	136	100.0	280	4	US-09-811-007A-42	Sequence 42, Appl		Sequence 42, Appl	
4	97	71.3	283	3	US-09-660-587-10	Sequence 10, Appl		Sequence 10, Appl	
5	97	71.3	283	4	US-09-261-258A-10	Sequence 10, Appl		Sequence 10, Appl	
6	97	71.3	283	4	US-09-158-6	Sequence 6, Appl		Sequence 6, Appl	
7	97	71.3	283	4	US-09-314-001-4	Sequence 4, Appl		Sequence 4, Appl	
8	97	71.3	283	4	US-09-811-007A-10	Sequence 10, Appl		Sequence 10, Appl	
9	52	38.2	378	4	US-09-134-000C-5909	Sequence 5909, Appl		Sequence 5909, Appl	
10	50	36.8	284	3	US-09-660-587-15	Sequence 15, Appl		Sequence 15, Appl	
11	50	36.8	284	4	US-09-261-258A-15	Sequence 15, Appl		Sequence 15, Appl	
12	50	36.8	284	4	US-09-301-158-11	Sequence 11, Appl		Sequence 11, Appl	
13	50	36.8	284	4	US-09-811-007A-15	Sequence 15, Appl		Sequence 15, Appl	
14	49	36.0	629	4	US-10-081-923-6	Sequence 6, Appl		Sequence 6, Appl	
15	49	36.0	1833	4	US-08-621-944A-4	Sequence 4, Appl		Sequence 4, Appl	
16	49	36.0	1833	4	US-08-945-967D-4	Sequence 4, Appl		Sequence 4, Appl	
17	49	36.0	1992	4	US-08-621-944A-3	Sequence 3, Appl		Sequence 3, Appl	
18	49	36.0	1992	4	US-08-145-967D-3	Sequence 48, Appl		Sequence 48, Appl	
19	49	36.0	2048	3	US-09-268-347-48	Sequence 33, Appl		Sequence 33, Appl	
20	48.5	35.7	416	1	US-08-464-523B-33	Sequence 19, Appl		Sequence 19, Appl	
21	48.5	35.7	476	4	US-09-600-170-19	Sequence 120, Appl		Sequence 120, Appl	
22	48	35.3	226	4	US-09-071-976-13	Sequence 118, Appl		Sequence 118, Appl	
23	48	35.3	252	4	US-09-071-935-118	Sequence 44, Appl		Sequence 44, Appl	
24	48	35.3	293	4	US-09-160-587-40	Sequence 40, Appl		Sequence 40, Appl	
25	48	35.3	293	4	US-09-314-001-44	Sequence 40, Appl		Sequence 40, Appl	
26	48	35.3	293	4	US-09-811-007A-40	Sequence 50, Appl		Sequence 50, Appl	
27	48	35.3	300	4	US-09-314-701-50				

Qy 1 PINGTNSLTKVKVFGLKKGDTTKDD Score 136; DB 4; Length 280;
 US-09-314-701-48

Query Match Best Local Similarity 100.0%; Pred. No. 5.6e-12; Indels 0; Gaps 0;
 Matches 26; Conservative 0; Mismatches 0;

Db 1 PINGTNSLTKVKVFGLKKGDTTKDD Score 136; DB 4; Length 280;
 61 PINGTNSLTKVKVFGLKKGDTTKDD 86

RESULT 5
 US-09-261-358A-10
 ; Sequence 10, Application US/09261358A
 ; Patent No. 6403780
 ; GENERAL INFORMATION:
 ; APPLICANT: Walker, David H.
 ; APPLICANT: McBride, Jere W.
 ; APPLICANT: Yu, Xue-Jie
 ; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
 ; Genes of *Ehrlichia canis* and Uses Thereof
 ; FILE REFERENCE: D6152CIP
 ; CURRENT APPLICATION NUMBER: US/09/261.358A
 ; CURRENT FILING DATE: 1999-03-03
 ; PRIOR APPLICATION NUMBER: 09/201,458
 ; PRIOR FILING DATE: 1998-11-30
 ; NUMBER OF SEQ ID NOS: 33
 ; SEQ ID NO 10
 ; LENGTH: 283
 ; TYPE: PRT
 ; ORGANISM: *Ehrlichia chaffeensis*
 ; FEATURE:
 ; OTHER INFORMATION: amino acid sequence of *E. chaffeensis* OMP-1B
 US-09-261-358A-10

Query Match Best Local Similarity 71.3%; Score 97; DB 4; Length 283;
 Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Qy 1 PINGTNSLTKVKVFGLKKGDTTKDD Score 97; DB 4; Length 283;
 US-09-261-358A-10
 ; Sequence 97, Application US/09261358A
 ; Patent No. 6403780
 ; GENERAL INFORMATION:
 ; APPLICANT: Walker, David H.
 ; APPLICANT: McBride, Jere W.
 ; APPLICANT: Yu, Xue-Jie
 ; TITLE OF INVENTION: Canis 8 and Uses Thereof
 ; FILE REFERENCE: D6152CIP
 ; CURRENT APPLICATION NUMBER: US/09/201.458A
 ; CURRENT FILING DATE: 1998-11-30
 ; NUMBER OF SEQ ID NOS: 21
 ; SEQ ID NO 6
 ; LENGTH: 283
 ; TYPE: PRT
 ; ORGANISM: *Ehrlichia chaffeensis*
 ; FEATURE:
 ; OTHER INFORMATION: amino acid sequence of *E. chaffeensis* OMP-1B
 US-09-261-358A-10

Query Match Best Local Similarity 71.3%; Score 97; DB 4; Length 283;
 Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Qy 1 PINGTNSLTKVKVFGLKKGDTTKDD Score 97; DB 4; Length 283;
 US-09-261-358A-10
 ; Sequence 97, Application US/09261358A
 ; Patent No. 6403780
 ; GENERAL INFORMATION:
 ; APPLICANT: Walker, David H.
 ; APPLICANT: McBride, Jere W.
 ; APPLICANT: Yu, Xue-Jie
 ; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
 ; Genes of *Ehrlichia canis* and Uses Thereof
 ; FILE REFERENCE: D6152CIP
 ; CURRENT APPLICATION NUMBER: US/09/660,587
 ; CURRENT FILING DATE: 2000-09-12
 ; PRIOR APPLICATION NUMBER: 09/261,358
 ; PRIOR FILING DATE: 1999-03-03
 ; NUMBER OF SEQ ID NOS: 46
 ; SEQ ID NO 42
 ; LENGTH: 280
 ; TYPE: PRT
 ; ORGANISM: *Ehrlichia canis*
 ; FEATURE:
 ; OTHER INFORMATION: amino acid sequence of *E. canis* p28-2 protein
 US-09-811-007A-42

Query Match Best Local Similarity 100.0%; Pred. No. 5.6e-12; Indels 0; Gaps 0;
 Matches 26; Conservative 0; Mismatches 0;

Db 1 PINGTNSLTKVKVFGLKKGDTTKDD Score 136; DB 4; Length 280;
 61 PINGTNSLTKVKVFGLKKGDTTKDD 86

RESULT 6
 US-09-201-458-6
 ; Sequence 6, Application US/09201458A
 ; Patent No. 6438942
 ; GENERAL INFORMATION:
 ; APPLICANT: Walker, David H.
 ; APPLICANT: McBride, Jere W.
 ; APPLICANT: Yu, Xue-Jie
 ; TITLE OF INVENTION: 28-kDa Immunoreactive Protein Gene of *Ehrlichia*
 ; canis and Uses Thereof
 ; FILE REFERENCE: D6152
 ; CURRENT APPLICATION NUMBER: US/09/201.458A
 ; CURRENT FILING DATE: 1998-11-30
 ; NUMBER OF SEQ ID NOS: 21
 ; SEQ ID NO 6
 ; LENGTH: 283
 ; TYPE: PRT
 ; ORGANISM: *Ehrlichia chaffeensis*
 ; FEATURE:
 ; OTHER INFORMATION: amino acid sequence of *E. chaffeensis* OMP-1B
 US-09-201-458-6

Query Match Best Local Similarity 71.3%; Score 97; DB 4; Length 283;
 Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Qy 1 PINGTNSLTKVKVFGLKKGDTTKDD Score 97; DB 4; Length 283;
 US-09-660-587-10
 ; Sequence 10, Application US/09660587
 ; Patent No. 6392033
 ; GENERAL INFORMATION:
 ; APPLICANT: Walker, David H.
 ; APPLICANT: McBride, Jere W.
 ; APPLICANT: Yu, Xue-Jie
 ; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
 ; Genes of *Ehrlichia canis* and Uses Thereof
 ; FILE REFERENCE: D6152CIP
 ; CURRENT APPLICATION NUMBER: US/09/660,587
 ; CURRENT FILING DATE: 2000-09-12
 ; PRIOR APPLICATION NUMBER: 09/261,358
 ; PRIOR FILING DATE: 1999-03-03
 ; NUMBER OF SEQ ID NOS: 46
 ; SEQ ID NO 10
 ; LENGTH: 283
 ; TYPE: PRT
 ; ORGANISM: *Ehrlichia chaffeensis*
 ; FEATURE:
 ; OTHER INFORMATION: amino acid sequence of *E. chaffeensis* OMP-1B
 US-09-660-587-10

Query Match Best Local Similarity 71.3%; Score 97; DB 3; Length 283;
 Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Qy 1 PINGTNSLTKVKVFGLKKGDTTKDD Score 97; DB 4; Length 283;
 US-09-314-701-4
 ; Sequence 4, Application US/09314701
 ; Patent No. 6544517

GENERAL INFORMATION:
 ; APPLICANT: Rikihisa, Yasuko
 ; APPLICANT: Ohasi, No. 654451710
 ; TITLE OF INVENTION: Outer Membrane Protein of *Ehrlichia Canis* and *Ehrlichia chaffeensis*
 ; FILE REFERENCE: 22722/0021
 ; CURRENT FILING DATE: 1999-05-19
 ; NUMBER OF SEQ ID NOS: 66
 ; SOFTWARE: Patentin Ver. 2.0
 ; SEQ ID NO: 4
 ; LENGTH: 283
 ; TYPE: PRT
 ; ORGANISM: *Ehrlichia chaffeensis*
 US-09-314-701-4

RESULT 8
 US-09-811-007A-10
 ; Sequence 10, Application US/09811007A
 ; Patent No. 6660269
 ; GENERAL INFORMATION:
 ; APPLICANT: Walker, David H.
 ; APPLICANT: McBride, Jere W.
 ; APPLICANT: Yu, Xue-Jie
 ; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
 ; FILE REFERENCE: D6152CIP2
 ; CURRENT FILING DATE: 2000-09-12
 ; NUMBER OF SEQ ID NOS: 46
 ; LENGTH: 284
 ; PRIOR APPLICATION NUMBER: US09/811,007A
 ; CURRENT FILING DATE: 2001-10-23
 ; NUMBER OF SEQ ID NOS: 46
 ; LENGTH: 283
 ; TYPE: PRT
 ; ORGANISM: *Ehrlichia chaffeensis*
 ; FEATURE:
 ; OTHER INFORMATION: amino acid sequence of *E. chaffeensis* OMP-1B
 US-09-811-007A-10

Query Match 71.3%; Score 97; DB 4; Length 283;
 Best Local Similarity 78.3%; Pred. No. 2.7e-06;
 Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;
 Qy 1 PINGNTSILTKVFGKKDGDITK 23
 Db 64 PINGNTSILTKVFGKKDGDIAQ 86

RESULT 9
 US-09-134-000C-5909
 ; Sequence 909, Application US/09134000C
 ; Patent No. 6617156
 ; GENERAL INFORMATION:
 ; APPLICANT: Lynn Doucette-Stamm et al
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO
 ; TITLE OF INVENTION: ENTEROCOCCUS PARCALIS FOR DIAGNOSTICS AND THERAPEUTICS
 ; FILE REFERENCE: 032796-032
 ; CURRENT APPLICATION NUMBER: US/09/134,000C
 ; CURRENT FILING DATE: 1998-08-13
 ; PRIOR APPLICATION NUMBER: US 60/055,778
 ; PRIOR FILING DATE: 1997-08-15
 ; NUMBER OF SEQ ID NOS: 6812
 ; SOFTWARE: Patentin version 3.1

Query Match 36.8%; Score 50; DB 4; Length 284;

RESULT 10
 US-09-660-587-15
 ; Sequence 15, Application US/09660587
 ; Patent No. 6392023
 ; GENERAL INFORMATION:
 ; APPLICANT: Walker, David H.
 ; APPLICANT: McBride, Jere W.
 ; APPLICANT: Yu, Xue-Jie
 ; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
 ; FILE REFERENCE: D6152CIP2
 ; CURRENT APPLICATION NUMBER: US/09/660,587
 ; CURRENT FILING DATE: 2000-09-12
 ; PRIORITY APPLICATION NUMBER: 09/261,358
 ; PRIOR FILING DATE: 1999-03-03
 ; NUMBER OF SEQ ID NOS: 46
 ; SEQ ID NO: 15
 ; LENGTH: 284
 ; TYPE: PRT
 ; ORGANISM: *Cowdria ruminantium*
 ; FEATURE:
 ; OTHER INFORMATION: amino acid sequence of *C. ruminantium* MAP-1
 US-09-660-587-15

Query Match 36.8%; Score 50; DB 3; Length 284;
 Best Local Similarity 73.3%; Pred. No. 18;
 Matches 11; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
 Qy 9 TCKVFGKKDGDITK 23
 Db 63 TAVFGKKWDGKV 77

RESULT 11
 US-09-261-358A-15
 ; Sequence 15, Application US/09261358A
 ; Patent No. 6403780
 ; GENERAL INFORMATION:
 ; APPLICANT: Walker, David H.
 ; APPLICANT: McBride, Jere W.
 ; APPLICANT: Yu, Xue-Jie
 ; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
 ; FILE REFERENCE: D6152CIP
 ; CURRENT APPLICATION NUMBER: US/09/261,358A
 ; CURRENT FILING DATE: 1999-03-03
 ; PRIORITY APPLICATION NUMBER: 09/201,458
 ; PRIOR FILING DATE: 1998-11-30
 ; SEQ ID NO: 15
 ; LENGTH: 284
 ; TYPE: PRT
 ; ORGANISM: *Cowdria ruminantium*
 ; FEATURE:
 ; OTHER INFORMATION: amino acid sequence of *C. ruminantium* MAP-1
 US-09-261-358A-15

Query Match 36.8%; Score 50; DB 4; Length 284;

Best Local Similarity 73.3%; Pred. No. 18;
Matches 11; Conservative 0; Mismatches 4;
Indels 0; Gaps 0;

Qy 9 TKVFGLKKDDGDTK 23
Db 63 TKAVFGLKKWDGTVK 77

RESULT 12
US-09-201-458-11
; Sequence 11, Application US/09201458A
; Patent No. 6458942
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: 28-kDa Immunoreactive Protein Gene of Ehrlichia
; TITLE OF INVENTION: canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT FILING DATE: 1998-11-30
; NUMBER OF SEQ ID NOS: 21
; SEQ ID NO 11
; LENGTH: 284
; TYPE: PRT
; ORGANISM: Cowdria ruminantium
; FEATURE:
; OTHER INFORMATION: amino acid sequence of C. ruminantium MAP-1

US-09-201-458-11

Query Match 36.8%; Score 50; DB 4; Length 284;
Best Local Similarity 73.3%; Pred. No. 18;
Matches 11; Conservative 0; Mismatches 4;
Indels 0; Gaps 0;

Qy 9 TKVFGLKKDDGDTK 23
Db 63 TKAVFGLKKWDGTVK 77

RESULT 13
US-09-811-007A-15
; Sequence 15, Application US/09811007A
; Patent No. 6660269
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: US/09/811,007A
; CURRENT FILING DATE: 2000-09-12
; PRIOR APPLICATION NUMBER: 09/660,587
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 15
; LENGTH: 284
; TYPE: PRT
; ORGANISM: Cowdria ruminantium
; FEATURE:
; OTHER INFORMATION: amino acid sequence of C. ruminantium MAP-1

US-09-811-007A-15

Query Match 36.8%; Score 50; DB 4; Length 284;
Best Local Similarity 73.3%; Pred. No. 18;
Matches 11; Conservative 0; Mismatches 4;
Indels 0; Gaps 0;

Qy 9 TKVFGLKKDDGDTK 23
Db 63 TKAVFGLKKWDGTVK 77

US-10-081-923-6
; Sequence 6, Application US/10081923
; Patent No. 6593093
; GENERAL INFORMATION:
; APPLICANT: Cockerill, Franklin R.
; TITLE OF INVENTION: Detection of Group A Streptococcus
; FILE REFERENCE: 07039-306001
; CURRENT APPLICATION NUMBER: US/10/081,923
; CURRENT FILING DATE: 2002-07-02
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 6
; LENGTH: 629
; TYPE: PRT
; ORGANISM: Group A Streptococcus

; FEATURE:
; OTHER INFORMATION: ptsI sequence from Oklahoma University M1 strain
; PUBLICATION INFORMATION:
; AUTHORS: Ferretti et al.
; JOURNAL: Proc. Natl. Acad. Sci. USA
; VOLUME: 98
; PAGES: 4658-4663
; DATE: 2001-01-01
US-10-081-923-6

Query Match 36.0%; Score 49; DB 4; Length 629;
Best Local Similarity 55.6%; Pred. No. 64;
Matches 10; Conservative 3; Mismatches 1; Indels 4; Gaps 1;
Qy 4 GTNSLTKVFGLKKDGTI 21
Db 222 GNDNITRVR---KDGVY 235

RESULT 15
US-08-621-944A-4
; Sequence 4, Application US/08621944A
; Patent No. 640425
; GENERAL INFORMATION:
; APPLICANT: SASAKI, Ken
; APPLICANT: HARNES, Robbin E.
; APPLICANT: LOOMORE, Sheena M.
; APPLICANT: KLEIN, Michel H.
; TITLE OF INVENTION: HIGH MOLECULAR WEIGHT MAJOR OUTER
; TITLE OF INVENTION: MEMBRANE PROTEIN OF MORAXELLA
; NUMBER OF SEQUENCES: 10
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurrey
; STREET: Suite 701, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: ParentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/621,944A
; FILING DATE: 26-MAR-1996
; CLASSIFICATION:
; PRIORITY APPLICATION DATA:
; APPLICATION NUMBER: US 08/478,370
; FILING DATE: 07-JUN-1995
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1018-587
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155

```

; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1833 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear

US-08-621-944A-4

Query Match Score 49; DB 4; Length 1833;
Best Local Similarity 38.1%; Pred. No. 2.2e+02;
Matches 8; Conservative 5; Mismatches 8; Indels 0; Gaps 0;

Qy      4 GTNSLTKKVFGLKKGDDITKK 24
          ||| : | : ||| : | : |
Db      271 GTTRTRDKIGFARDGVDEK 291

Search completed: August 27, 2005, 08:42:21

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OM protein - protein search, using sw model

Run on: August 27, 2005, 08:41:37 ; Search time 18:43:79 Seconds

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Searched: 1767149 seqs, 392926209 residues

Total number of hits satisfying chosen parameters: 1767149

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100%

Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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3	136	100.0	280	13 US-10-059-964-48	Sequence 48, Appl
4	136	100.0	280	14 US-10-062-051-42	Sequence 42, Appl
5	136	100.0	280	14 US-10-062-920-42	Sequence 42, Appl
6	136	100.0	280	14 US-10-314-639-48	Sequence 48, Appl
7	136	100.0	280	16 US-10-680-349-42	Sequence 42, Appl
8	136	100.0	280	16 US-10-731-054-42	Sequence 42, Appl
9	136	100.0	280	16 US-10-901-714-48	Sequence 48, Appl
10	136	100.0	280	16 US-10-901-774-4	Sequence 48, Appl
11	97	71.3	283	14 US-10-285-042-14	Sequence 14, Appl
12	97	71.3	283	10 US-09-811-007-10	Sequence 10, Appl
13	97	71.3	283	13 US-10-062-964-4	Sequence 4, Appl
14	97	71.3	283	14 US-10-067-051-10	Sequence 10, Appl
15	97	71.3	283	14 US-10-284-986-14	Sequence 14, Appl
16	97	71.3	283	14 US-10-062-920-10	Sequence 10, Appl
17	97	71.3	283	14 US-10-314-639-4	Sequence 14, Appl
18	97	71.3	283	14 US-10-369-293-14	Sequence 14, Appl
19	97	71.3	283	14 US-10-369-293-14	Sequence 14, Appl
20	97	71.3	283	14 US-10-369-293-14	Sequence 14, Appl
21	97	71.3	283	16 US-10-680-349-10	Sequence 10, Appl
22	97	71.3	283	16 US-10-731-554-10	Sequence 10, Appl
23	97	71.3	283	16 US-10-901-714-4	Sequence 4, Appl
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36	50	36.8	284	10 US-09-811-007-15	Sequence 15, Appl
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38	50	36.8	284	14 US-10-062-051-15	Sequence 15, Appl
39	50	36.8	284	14 US-10-062-920-15	Sequence 15, Appl
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42	49.5	36.4	205	16 US-10-767-701-41494	Sequence 41494, A
43	49.5	36.4	521	10 US-09-820-843A-93	Sequence 93, Appl
44	49.5	36.4	554	14 US-10-125-692-21	Sequence 21, Appl
45	49.5	36.4	554	18 US-10-991-347-21	Sequence 21, Appl

ALIGNMENTS

RESULT 1
 US-09-811-007-42
 ; Sequence 42, Application US/09811007
 ; Publication No. US20030185849A1
 ; GENERAL INFORMATION:
 ; APPLICANT: McBride, Jere W.
 ; APPLICANT: Yu, Xue-Jie
 ; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
 ; FILE REFERENCE: D6152CIP2
 ; CURRENT APPLICATION NUMBER: US/09/811,007
 ; PRIORITY FILING DATE: 2001-03-16
 ; PRIORITY APPLICATION NUMBER: 09/660,587
 ; NUMBER OF SEQ ID NOS: 46
 ; SEQ ID NO 42
 ; LENGTH: 280
 ; TYPE: PRT
 ; ORGANISM: Ehrlichia canis
 ; FEATURE:
 ; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
 US-09-811-007-42

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 Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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 Db 61 PINGINSLTKVFGKKGDKBDITKKDD 86

RESULT 2

US-10-062-624-42
; Sequence 42, Application US/10062624
; Publication No. US2002115840A1
; GENERAL INFORMATION:
; APPLICANT: McBride, David H.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2/D1
; CURRENT APPLICATION NUMBER: US/10/062,624
; CURRENT FILING DATE: 2002-01-31
; PRIOR APPLICATION NUMBER: 09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 42
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
; US-10-062-051-42

Query Match Score 136; DB 13; Length 280;
Best Local Similarity 100.0%; Pred. No. 1.3e-11;
Matches 26; Conservative 0; Mismatches 0;
Indels 0; Gaps 0;

Qy 1 PINGTNSLTKKVFGKKGDDITKKDD 26
Db 61 PINGTNSLTKKVFGKKGDDITKKDD 86

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; Sequence 42, Application US/10062920
; Publication No. US2003096250A1
; GENERAL INFORMATION:
; APPLICANT: McBride, David H.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/10/062,920
; CURRENT FILING DATE: 2002-01-31
; PRIOR APPLICATION NUMBER: US/10/062,920
; PRIOR FILING DATE: 2000-09-12
; PRIOR APPLICATION NUMBER: 09/261,358
; PRIOR FILING DATE: 1999-03-03
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 42
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
; US-10-062-920-42

Query Match Score 136; DB 14; Length 280;
Best Local Similarity 100.0%; Pred. No. 1.3e-11;
Matches 26; Conservative 0; Mismatches 0;
Indels 0; Gaps 0;

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Db 61 PINGTNSLTKKVFGKKGDDITKKDD 86

RESULT 6
US-10-314-639-48
; Sequence 48, Application US/10314639
; Publication No. US2003010399A1
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; APPLICANT: Ohasi, No.
; TITLE OF INVENTION: Genes of Ehrlichia canis and Ehrlichia
; FILE REFERENCE: 22727/04021
; CURRENT APPLICATION NUMBER: US/10/059,964
; CURRENT FILING DATE: 2002-01-18
; EARLIER APPLICATION NUMBER: 09/314,701
; EARLIER FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 48
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis

US-10-059-964-48
; Sequence 48, Application US/10062051
; Publication No. US2003007095A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; FILE REFERENCE: 22727/04021
; CURRENT APPLICATION NUMBER: US/10/314,639
; CURRENT FILING DATE: 2002-02-09
; PRIOR APPLICATION NUMBER: US/09/314,701

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; PRIOR FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
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; SEQ ID NO 48
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; US-10-314-639-48

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Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 61 PINGTNSLTKVFGKKGDKDTKDD 86
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US-10-901-714-48
; Sequence 48, Application US/10901714
; Publication No. US20040265333A1
; GENERAL INFORMATION:
; APPLICANT: OIKHISA, NORIO
; TITLE OF INVENTION: OUTER MEMBRANE PROTEIN OF EHRЛИCHIA CANIS AND EHLICHIA
; FILE REFERENCE: 22727-04109
; CURRENT APPLICATION NUMBER: US/10/901,714
; CURRENT FILING DATE: 2004-07-29
; PRIOR APPLICATION NUMBER: 09/314,701
; PRIOR FILING DATE: 1999-05-19
; PRIOR APPLICATION NUMBER: 60/100,843
; PRIOR FILING DATE: 1998-09-18
; NUMBER OF SEQ ID NOS: 69
; SOFTWARE: PatentIn Ver. 3.2
; SEQ ID NO 48
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; US-10-901-714-48

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Best Local Similarity 100.0%; Pred. No. 1.3e-11;
Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 61 PINGTNSLTKVFGKKGDKDTKDD 86
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; Publication No. US20040265334A1
; GENERAL INFORMATION:
; APPLICANT: OIKHISA, NORIO
; TITLE OF INVENTION: OUTER MEMBRANE PROTEIN OF EHRЛИCHIA CANIS AND EHLICHIA
; FILE REFERENCE: 22727-04109
; CURRENT APPLICATION NUMBER: US/10/901,774
; CURRENT FILING DATE: 2004-07-29
; PRIOR APPLICATION NUMBER: 09/314,701
; PRIOR FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 69
; SOFTWARE: PatentIn Ver. 3.2
; SEQ ID NO 48
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; US-10-901-774-48

Query Match 100.0%; Score 136; DB 16; Length 280;
Best Local Similarity 100.0%; Pred. No. 1.3e-11;
Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PINGTNSLTKVFGKKGDKDTKDD 26
Db 61 PINGTNSLTKVFGKKGDKDTKDD 86
RESULT 8
US-10-731-554-42
; Sequence 42, Application US/10731554
; Publication No. US2004247616A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/10/731,554
; CURRENT FILING DATE: 2003-12-09
; PRIOR APPLICATION NUMBER: US/09/811,007
; PRIOR FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 09/660,587
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 42
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; US-10-901-774-48

Query Match 100.0%; Score 136; DB 16; Length 280;

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Best Local Similarity 100.0%; Pred. No. 1.3e-11;
Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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; Publication No. US20020115810A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-Kilodalton Immunodominant Protein
; Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2/D1
; CURRENT APPLICATION NUMBER: US/10/062,624
; CURRENT FILING DATE: 2002-01-31
; PRIOR APPLICATION NUMBER: 09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 10
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of *E. chaffeensis* OMP-1B
US-10-062-624-10

Query Match 71.3%; Score 97; DB 13; Length 283;
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Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

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US-10-059-964-4
; Sequence 4, Application US/10059964
; Publication No. US20020120115A1
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; TITLE OF INVENTION: Chaffeensis
; FILE REFERENCE: 22/27/04021
; CURRENT APPLICATION NUMBER: US/10/059,964
; CURRENT FILING DATE: 2002-01-28
; EARLIER APPLICATION NUMBER: 09/314,701
; EARLIER FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
US-10-059-964-4

Query Match 71.3%; Score 97; DB 13; Length 283;
Best Local Similarity 78.3%; Pred. No. 7.1e-06;
Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

RESULT 15
US-10-062-051-10
; Sequence 10, Application US/10062051
; Publication No. US2003007309A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie

Best Local Similarity 100.0%; Pred. No. 1.3e-11;
Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

RESULT 12
US-09-811-007-10
; Sequence 10, Application US/09811007
; Publication No. US2003018849A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/09/811,007
; CURRENT FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 10
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of *E. chaffeensis* OMP-1B
US-09-811-007-10

Query Match 71.3%; Score 97; DB 10; Length 283;
Best Local Similarity 78.3%; Pred. No. 7.1e-06;
Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

RESULT 23
US-10-059-964-3
; Sequence 4, Application US/10059964
; Publication No. US20020120115A1
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; TITLE OF INVENTION: Chaffeensis
; FILE REFERENCE: 22/27/04021
; CURRENT APPLICATION NUMBER: US/10/059,964
; CURRENT FILING DATE: 2002-01-28
; EARLIER APPLICATION NUMBER: 09/314,701
; EARLIER FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
US-10-059-964-3

Query Match 71.3%; Score 97; DB 13; Length 283;
Best Local Similarity 78.3%; Pred. No. 7.1e-06;
Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

RESULT 23
US-10-059-964-2
; Sequence 4, Application US/10059964
; Publication No. US20020120115A1
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; TITLE OF INVENTION: Chaffeensis
; FILE REFERENCE: 22/27/04021
; CURRENT APPLICATION NUMBER: US/10/059,964
; CURRENT FILING DATE: 2002-01-28
; EARLIER APPLICATION NUMBER: 09/314,701
; EARLIER FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
US-10-059-964-2

Query Match 71.3%; Score 97; DB 10; Length 283;
Best Local Similarity 78.3%; Pred. No. 7.1e-06;
Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

RESULT 23
US-10-059-964-1
; Sequence 4, Application US/10059964
; Publication No. US20020120115A1
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; TITLE OF INVENTION: Chaffeensis
; FILE REFERENCE: 22/27/04021
; CURRENT APPLICATION NUMBER: US/10/059,964
; CURRENT FILING DATE: 2002-01-28
; EARLIER APPLICATION NUMBER: 09/314,701
; EARLIER FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
US-10-059-964-1

Query Match 71.3%; Score 97; DB 10; Length 283;
Best Local Similarity 78.3%; Pred. No. 7.1e-06;
Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

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; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; TITLE OF INVENTION: Chaffeensis
; FILE REFERENCE: 22/27/04021
; CURRENT APPLICATION NUMBER: US/10/059,964
; CURRENT FILING DATE: 2002-01-28
; EARLIER APPLICATION NUMBER: 09/314,701
; EARLIER FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
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; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
US-10-059-964-0

; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US 10/062,051
; CURRENT FILING DATE: 2002-01-31
; PRIOR APPLICATION NUMBER: US/09/660,587
; PRIOR FILING DATE: 2000-09-12
; PRIOR APPLICATION NUMBER: 09/261,358
; PRIOR FILING DATE: 1999-03-03
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 10
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of *E. chaffeensis* Omp-1B
US-10-062-051-10
Query Match Score 97; DB 14; Length 283;
Best Local Similarity 78.3%; Pred. No. 7.1e-06;
Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;
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Db 64 PINGNTSITKVKFGIKKDGDIAQ 86

Search completed: August 27, 2005, 08:59:35
Job time : 19.4379 secs

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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: August 27, 2005, 08:41:33 ; Search time 35.6863 Seconds

(without alignments)
585.708 Million cell updates/secTitle: US-10-680-349-42
Perfect score: 1462

Sequence: MNYKKLVRSAISLMSILP.....ASVTLDVGYFGEIGMRFTF 280

Scoring table: BLOSUM62

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Total number of hits satisfying chosen parameters:

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Minimum DB seq length: 0
Maximum DB seq length: 20000000000Post-processing: Minimum Match 0%
Maximum Match 100%

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query	Match	Length	DB ID	Description
1	1462	100.0	280	3	US-09-680-387-42	Sequence 42, App1
2	1462	100.0	280	4	US-09-314-701-48	Sequence 48, App1
3	1462	100.0	280	4	US-09-811-007A-42	Sequence 42, App1
4	1202.5	82.3	283	3	US-09-660-387-10	Sequence 10, App1
5	1202.5	82.3	283	4	US-09-261-358A-10	Sequence 10, App1
6	1202.5	82.3	283	4	US-09-261-358A-10	Sequence 6, App1
7	1202.5	82.3	283	4	US-09-587-6	Sequence 6, App1
8	1202.5	82.3	283	4	US-09-314-701-4	Sequence 4, App1
9	644.5	44.1	281	3	US-09-811-007A-10	Sequence 9, App1
10	644.5	44.1	281	4	US-09-261-358A-9	Sequence 9, App1
11	644.5	44.1	281	4	US-09-201-458-5	Sequence 5, App1
12	644.5	44.1	281	4	US-09-314-701-9	Sequence 9, App1
13	642.5	43.9	281	4	US-09-314-701-2	Sequence 2, App1
14	629.5	43.1	276	3	US-08-953-326-18	Sequence 18, App1
15	629.5	43.1	276	4	US-09-553-652-18	Sequence 18, App1
16	629.5	43.1	276	4	US-10-062-994-18	Sequence 18, App1
17	621	42.5	288	4	US-09-314-701-32	Sequence 32, App1
18	620	42.4	286	3	US-08-553-626-15	Sequence 15, App1
19	620	42.4	286	3	US-09-660-587-12	Sequence 12, App1
20	620	42.4	286	4	US-09-261-358A-12	Sequence 12, App1
21	620	42.4	286	4	US-09-01-587-8	Sequence 8, App1
22	620	42.4	286	4	US-09-314-701-8	Sequence 8, App1
23	620	42.4	286	4	US-09-553-662-15	Sequence 15, App1
24	620	42.4	286	4	US-10-662-994-15	Sequence 15, App1
25	605	41.4	280	3	US-09-811-007A-12	Sequence 12, App1
26	605	41.4	280	3	US-09-660-587-14	Sequence 14, App1
27	605	41.4	280	4	US-09-261-358A-14	Sequence 14, App1

ALIGNMENTS

RESULT 1						
US-09-660-587-42	Sequence 42, Application US-09660587	Patent No. 6392023				
	GENERAL INFORMATION:					
	APPLICANT: Walker, David H.	McBride, Jere W.				
	APPLICANT: Yu, Xue-Jie					
	TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein of Ehrlichia canis and Uses Thereof					
	TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof					
	FILE REFERENCE: D6152CP2					
	CURRENT APPLICATION NUMBER: US/09/660 , 587					
	CURRENT FILING DATE: 2000-09-12					
	PRIOR APPLICATION NUMBER: 09/261,358					
	PRIOR FILING DATE: 1999-03-03					
	NUMBER OF SEQ ID NOS: 46					
	SEQ ID NO 42					
	LENGTH: 280					
	TYPE: PRT					
	ORGANISM: Ehrlichia canis					
	FEATURE:					
	OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein					
	US-09-660-587-42					

US-09-314-701-48
; Sequence 42 Application US/09314701
; Patent No. 6544517
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; APPLICANT: Ohbai, No. 6544517ic
; TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
; FILE REFERENCE: 2222/04021
; CURRENT APPLICATION NUMBER: US/09/314,701
; CURRENT FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO: 48
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
US-09-314-701-48

Query Match Score 100.0%; Score 1462; DB 4; Length 280;
Best Local Similarity 100.0%; Pred. No. 8.2e-151; Indels 0; Gaps 0;
Matches 288; Conservative 0; Mismatches 0; Gaps 0;

RESULT 3
US-09-811-007A-42
; Sequence 42 Application US/09811007A
; Patent No. 6660269
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; FILE REFERENCE: D615CIP2
; CURRENT APPLICATION NUMBER: US/09/811,007A
; CURRENT FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: 09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO: 42
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
; OTHER INFORMATION: amino acid sequence of E. chaffeensis OMP-1B
US-09-811-007A-42

Query Match Score 100.0%; Score 1462; DB 4; Length 280;
Best Local Similarity 100.0%; Pred. No. 8.2e-151; Indels 0; Gaps 0;
Matches 288; Conservative 0; Mismatches 0; Gaps 0;

RESULT 4
US-09-660-587-10
; Sequence 10 Application US/09660587
; Patent No. 6339023
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; FILE REFERENCE: D615CIP2
; CURRENT APPLICATION NUMBER: US/09/660,587
; CURRENT FILING DATE: 2000-09-12
; PRIOR APPLICATION NUMBER: 09/261,358
; PRIOR FILING DATE: 1999-03-03
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO: 10
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. chaffeensis OMP-1B
US-09-660-587-10

Query Match Score 82.3%; Score 1202.5; DB 3; Length 283;
Best Local Similarity 79.5%; Pred. No. 1.6e-122;
Matches 225; Conservative 26; Mismatches 29; Indels 3; Gaps 1;

RESULT 5
US-09-261-358A-10
; Sequence 10 Application US/09261358A
; Patent No. 6403780

GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP
; CURRENT APPLICATION NUMBER: US/09/261,358A
; CURRENT FILING DATE: 1999-03-03
; PRIOR FILING DATE: 09/201,458
; NUMBER OF SEQ ID NOS: 33
; SEQ ID NO 10
; LENGTH: 283
; TYPE: PRT
; FEATURE: Ehrlichia chaffeensis
; OTHER INFORMATION: amino acid sequence of E. chaffeensis OMP-1B

Query Match 82.3%; Score 1202.5; DB 4; Length 283;
Best Local Similarity 79.5%; Pred. No. 1.6e-122; Mismatches 26; Indels 3; Gaps 1;
Matches 225; Conservative 29;

Qy 1 MNYYKKILVRSLALISMSLILPYQSADPVGCSR---TNDNKEGFYISAKYNPSISHRKFSA 57
Db 1 MNYYKKIFVSSLALISMSLILPYQSADPVGCSR---TNDNKEGFYISAKYNPSISHRKFSA 60

Qy 58 EETPINGNTSLTKVKGKDDITKKGDTTRAVPGIDFONNLISGFSGSIGYSMDGPRI 117
Db 61 EEAINGNTSLTKVKGKDDITKKGDTTRAVPGIDFONNLISGFSGSIGYSMDGPRI 120

Qy 118 ELEAYQQFPKNTDNDNTDNGEYKHFALSRKDAMEDQQYVVLKNDGTFSMLMVNCY 177
Db 121 ELEAYQQFPKNTDNDNTDNGEYKHFALSRKDAMEDQQYVVLKNEGTFSMLMVNCY 180

Qy 178 DITAEGVSFVPIYACAGIGADLITFKDLNPKFAYQKIGISYSPITPEVSAFIGGYHGVYI 237
Db 181 DITAEGVSFVPIYACAGIGADLITFKDLNPKFAYQKIGISYSPITPEVSAFIGGYHGVYI 240

Qy 238 GNKEPKIPVTPVVLNDAPOTTSASVTLDVGYFGGEIGMRFTF 280
Db 241 GNNFNPKIPVTPVVLNDAPOTTSASVTLDVGYFGGEIGMRFTF 283

RESULT 6
US-09-201-458-6
; Sequence 6, Application US/09201458A
; Patent No. 6458942
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: 28-kDa Immunoreactive Protein Gene of Ehrlichia
; FILE REFERENCE: D6152
; CURRENT APPLICATION NUMBER: US/09/201,458A
; CURRENT FILING DATE: 1998-11-30
; NUMBER OF SEQ ID NOS: 21
; SEQ ID NO 6
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
; OTHER INFORMATION: amino acid sequence of E. chaffeensis OMP-1B

Query Match 82.3%; Score 1202.5; DB 4; Length 283;
Best Local Similarity 79.5%; Pred. No. 1.6e-122; Mismatches 26; Indels 3; Gaps 1;
Matches 225; Conservative 29;

Qy 1 MNYYKKILVRSLALISMSLILPYQSADPVGCSR---TNDNKEGFYISAKYNPSISHRKFSA 57
Db 1 MNYYKKIFVSSLALISMSLILPYQSADPVGCSR---TNDNKEGFYISAKYNPSISHRKFSA 60

Qy 58 EETPINGNTSLTKVKGKDDITKKGDTTRAVPGIDFONNLISGFSGSIGYSMDGPRI 117
Db 61 EEAINGNTSLTKVKGKDDITKKGDTTRAVPGIDFONNLISGFSGSIGYSMDGPRI 120

Qy 118 ELEAYQQFPKNTDNDNTDNGEYKHFALSRKDAMEDQQYVVLKNDGTFSMLMVNCY 177
Db 121 ELEAYQQFPKNTDNDNTDNGEYKHFALSRKDAMEDQQYVVLKNEGTFSMLMVNCY 180

Qy 178 DITAEGVSFVPIYACAGIGADLITFKDLNPKFAYQKIGISYSPITPEVSAFIGGYHGVYI 237
Db 181 DITAEGVSFVPIYACAGIGADLITFKDLNPKFAYQKIGISYSPITPEVSAFIGGYHGVYI 240

Qy 238 GNKEPKIPVTPVVLNDAPOTTSASVTLDVGYFGGEIGMRFTF 280
Db 241 GNNFNPKIPVTPVVLNDAPOTTSASVTLDVGYFGGEIGMRFTF 283

RESULT 8
US-09-811-007A-10
; Sequence 10, Application US/09811007A
; Patent No. 6660269
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein

TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
FILE REFERENCE: D6152CIP2
CURRENT APPLICATION NUMBER: US/09/811,007A
CURRENT FILING DATE: 2001-10-23
PRIOR APPLICATION NUMBER: 09/660,587
PRIOR FILING DATE: 2000-09-12
NUMBER OF SEQ ID NOS: 46
SEQ ID NO 10
LENGTH: 283
TYPE: PRT
ORGANISM: Ehrlichia chaffeensis
FEATURE:
OTHER INFORMATION: amino acid sequence of *E. chaffeensis* OMP-1B
US-09-811-007A-10

Query Match Score 82.3%; DB 4; Length 283;

Best Local Similarity 79.5%; Pred. No. 1.6e-129;
Matches 225; Conservative 26; Mismatches 29; Indels 3; Gaps 1;

Qy 1 MNKKILYRSALISLMSLIPYQSFADPVGSR---TNDNKEGFYISAKYNPSISHFRKFSA 57
Db 1 MNKKIVFSSLALISLMSLIPYQSFADPVGSR---TNDNKEGFYISAKYNPSISHFRKFSA 60
Qy 58 EETPINGNTNSLTKVKVFGKDKDITKDDFTRYAPGIDFQNNLISGFSGSIGYSMDGPRI 117
Db 61 EEAPINGNTSITKVKVFGKDKDIAQSANFRNTDPALEFQNNLISGFSGSIGYSMDGPRI 120
Qy 118 ELEYAQEPNPNTDNDTNGEYKHPALSRKDAEDQQXVVLKNDGITFMSLMNTCY 177
Db 121 ELEYAQEPDAKPNPDNNNTGDDYKVKPGLSRDEDAKYYVVLKNECFTMSLMNTCY 180
Qy 178 DTAEGVSFVPPYACAGIGADLITIFDLNLKFAQYQKGKIGISYPITPEVSAFIGGYTHGV 237
Db 181 DTAEGVPPYACAGVGADLINVFKDNLNKFSVQKGKIGISYPITPEVSAFIGGYTHGV 240
Qy 238 GNKEKIPVPTPVVVLNDAPQTTSASVTLDVGYFGEIGMRFTF 280
Db 241 GNNFNKIPVPTPVVLEGQTTSALVTDGYFGEVCRFTF 283

RESULT 9
US-09-660-587-9
Sequence 9, Application US/09660587
Patent No. 6392023
GENERAL INFORMATION:
APPLICANT: Walker, David H.
Mcbride, Jere W.
APPLICANT: Yu, Xue-Jie
TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
TITLE OF INVENTION: Genes of *Ehrlichia canis* and Uses Thereof
FILE REFERENCE: D6152CIP2
CURRENT APPLICATION NUMBER: US/09/660,587
CURRENT FILING DATE: 2000-09-12
PRIOR APPLICATION NUMBER: 09/261,358
PRIOR FILING DATE: 1999-03-03
NUMBER OF SEQ ID NOS: 46
SEQ ID NO 9
LENGTH: 281
TYPE: PRT
ORGANISM: *Ehrlichia chaffeensis*
FEATURE:
OTHER INFORMATION: amino acid sequence of *E. chaffeensis* P28
US-09-660-587-9

Query Match Score 44.1%; DB 4; Length 281;
Best Local Similarity 48.1%; Pred. No. 1.1e-61;
Matches 140; Conservative 41; Mismatches 89; Indels 21; Gaps 6;

Qy 1 MNKKILYRSALISLMSLIPYQSFADPVGSR---TNDNKEGFYISAKYNPSISHFRKFSA 60
Db 1 MNKKIVFSSLALISLMSLIPYQSFADPVGSR---TNDNKEGFYISAKYNPSISHFRKFSA 60
Qy 61 PINGNTSLTKVKVFGKDKDITKDDFTRYAPGIDFQNNLISGFSGSIGYSMDGPRI 114
Db 57 ---ERNTTVGFGKDKDITKDDFTRYAPGIDFQNNLISGFSGSIGYSMDGPRI 112
Qy 115 PRLLEAYQQNPNTDNDTNGEYKHPALSRKDAEDQQXVVLKNDGITFMS 170
Db 113 PRLEESYETDVKQGNN--YKNEAHRYCALSHNSAADMSSAASNFPVFLKNEGGLDIS 170
Qy 171 LMVNTCYDITAEGVSPFVPPYACAGIGADLITIFDLNLKFAQYQKGKIGISYPITPEVSAFIG 230
Db 171 FMLNACDVGGGIPPFSPYICAGITLVSMBEATNPKISTQGKLGSYSISPEASTVFIG 230
Qy 231 GYHGIVGNKEKIPVPTPVVVLNDAPQ-TTSAVTLDVGYFGEIGMRFTF 280
Db 231 GHFKVGNEFRDPTIPTGSTLLAGGNYPAVILVCHFGEELGRFAF 281

RESULT 11
US-09-201-458-5
Sequence 5, Application US/09201458A
Patent No. 645942
GENERAL INFORMATION:
APPLICANT: Walker, David H.
Mcbride, Jere W.
APPLICANT: Yu, Xue-Jie
TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
FILE REFERENCE: D6152CIP2
CURRENT APPLICATION NUMBER: US/09/660,587
CURRENT FILING DATE: 2000-09-12
PRIOR APPLICATION NUMBER: 09/261,358
PRIOR FILING DATE: 1999-03-03
NUMBER OF SEQ ID NOS: 46
SEQ ID NO 9
LENGTH: 281
TYPE: PRT
ORGANISM: *Ehrlichia chaffeensis*
FEATURE:
OTHER INFORMATION: amino acid sequence of *E. chaffeensis* P28
US-09-660-587-9

Query Match Score 44.1%; DB 3; Length 281;
Best Local Similarity 48.1%; Pred. No. 1.1e-61;
Matches 140; Conservative 41; Mismatches 89; Indels 21; Gaps 6;

Qy 1 MNKKILYRSALISLMSLIPYQSFADPVGSR---TNDNKEGFYISAKYNPSISHFRKFSA 60
Db 1 MNKKIVFSSLALISLMSLIPYQSFADPVGSR---TNDNKEGFYISAKYNPSISHFRKFSA 56
Qy 61 PINGNTSLTKVKVFGKDKDITKDDFTRYAPGIDFQNNLISGFSGSIGYSMDGPRI 114

5
age

; TITLE OF INVENTION: 28-kDa Immunoreactive Protein Gene of Ehrlichia
 ; FILE OF INVENTION: canis and Uses Thereof
 ; FILE REFERENCE: DE152
 ; CURRENT APPLICATION NUMBER: US/09/201,458A
 ; NUMBER OF FILING DATE: 1998-11-30
 ; SEQ ID NO: 5
 ; LENGTH: 281
 ; TYPE: PRT
 ; ORGANISM: Ehrlichia chaffeensis
 ; FEATURE:
 ; OTHER INFORMATION: amino acid sequence of E. chaffeensis P28
 US-09-201-458-5

Query Match 44.1%; Score 644.5; DB 4; Length 281;
 Best Local Similarity 48.1%; Pred. No. 1..1e-61;
 Matches 140; Conservative 41; Mismatches 89; Indels 21; Gc

Qy 1 MNYYKKLVRSLALISMSILPYOSFADPGSRTNDNKEGYIISAKYNPSTISHFRKFPSI
 Db 1 MNYYKKVPTISLSSLPeVSFSDPAGSGIN--FYISGRKXMPSSASHFGVFS

Qy 61 PINGTNLSLKVFGLRKDGD-----ITKDDDFTRVAPGIDFQNNLISCFSGSIGY
 Db 57 ---BRNTTVGFGLLQNWDSDAISNSPNDVFTVSKNSPKYEANPFGAGAYGKYY
 Qy 115 PRIELFAAYQQFNPKNKTDDNNDTDDGEEYKHFHALSRKDAME---DQQYVVLKNDGII
 Db 113 PRIELFVSYETFDVQOGNN--YKNEBAHYCALSHNSAADMSSASNFTFLKNEGNL
 Qy 171 LMVNNTYDITAEGVSPVYACAGIGADLTIFKDNLNKLAYKGKIGISVPPEVSI
 Db 171 FMLNACDVGEGIPSPYICAGITDLYSMFEATNPKISYQKLGSYSISPEAS

Qy 231 GYHGVIGVGNKEPKIPIVTPVVLNDAPQ-TISASVTLDVYFGGEIGWRTFT 280
 Db 231 GHFKVIGNEFRDIPPIPTGSTLAGKGNPAIVLDVCHFGIELGRFAF 281

RESULT 12
 US-09-811-007A-9
 ; Sequence 9, Application US/09811007A
 ; Parent No. 6660269
 ; GENERAL INFORMATION:
 ; APPLICANT: Walker, David H.
 ; APPLICANT: McBride, Jere W.
 ; APPLICANT: Yu, Xue-Jie
 ; TITLE OF INVENTION: Homologous 28-Kilodalton Immunodominant Protein
 ; CURRENT APPLICATION NUMBER: Genes of Bhrlicha canis and Uses Thereof
 ; FILE REFERENCE: D6152CIP2
 ; CURRENT FILING DATE: 2001-10-23
 ; PRIOR APPLICATION NUMBER: 09/660, 587
 ; PRIOR FILING DATE: 2000-09-12
 ; NUMBER OF SEQ ID NOS: 46
 ; SEQ ID NO: 9
 ; LENGTH: 281
 ; TYPE: PRT
 ; ORGANISM: Ehrlichia chaffeensis
 ; FEATURE:
 ; OTHER INFORMATION: amino acid sequence of E. chaffeensis P28
 US-09-811-007A-9

Query Match 44.1%; Score 644.5; DB 4; Length 281;
 Best Local Similarity 48.1%; Pred. No. 1..1e-61;
 Matches 140; Conservative 41; Mismatches 89; Indels 21; Gc

Qy 1 MNYYKKLVRSLALISMSILPYOSFADPGSRTNDNKEGYIISAKYNPSTISHFRKFPSI
 Db 1 MNYYKKVPTISLSSLPeVSFSDPAGSGIN--FYISGRKXMPSSASHFGVFS

Qy 61 PINGTNLSLKVFGLRKDGD-----ITKDDDFTRVAPGIDFQNNLISCFSGSIGY

; TITLE OF INVENTION: Animals and Humans
; FILE REFERENCE: UF-167C1
; CURRENT APPLICATION NUMBER: US/08/953,326
; CURRENT FILING DATE: 1997-10-17
; EARLIER APPLICATION NUMBER: 08/953,326
; EARLIER FILING DATE: 1997-10-17
; EARLIER APPLICATION NUMBER: 08/733,230
; EARLIER FILING DATE: 1996-10-17
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO: 18
; LENGTH: 276
; TYPE: PRT
; ORGANISM: *Ehrlichia chaffeensis*

US-09-553-662-18

Query Match 43.1%; Score 629.5; DB 4; Length 276;
Best Local Similarity 47.9%; Pred. No. 4.5e-60;
Matches 137; Conservative 41; Mismatches 87; Indels 21; Gaps 6;

Qy 1 MNYYKIVLVRSLALISMLPYSFADPGSRNDNKEGYISAKYNSISHPRKFSAEET 60
Db 1 MNYYKIVPVTSLALISLSPGVSFSDPAGSGTGN - - FYISGKYMPSASHGVFSAKE- 56

Qy 61 PINGTNSLTCKVFGLKXKDGD-----ITKKDDFTRVAPGIDFQNNLISGFSGSIGYSMDG 114
Db 57 ---ERNITYVGVFGLKONWDGAISNSPNDFTVSNSYFSKYENNPLUGAGTGSNDG 112

Qy 115 PIRELEAYQQNPKNQNTDNDGEYKHFALSRKDAE---DOQYVVLKNDGTTFMS 170
Db 113 PRIELEYSYETDVKNQGNN - - YKNEAHRYCALSHNSAADMSSASNFPFLNEGLLDIS 170

Qy 1 MNYYKIVLVRSLALISMLPYSFADPGSRNDNKEGYISAKYNSISHPRKFSAEET 60
Db 1 MNYYKIVFVTSLALISLSPGVSFSDPAGSGTGN - - FYISGKYMPSASHGVFSAKE- 56

Qy 61 PINGTNSLTCKVFGLKXKDGD-----ITKKDDFTRVAPGIDFQNNLISGFSGSIGYSMDG 114
Db 57 ---ERNITYVGVFGLKONWDGAISNSPNDFTVSNSYFSKYENNPLUGAGTGSNDG 112

Qy 115 PIRELEAYQQNPKNQNTDNDGEYKHFALSRKDAE---DOQYVVLKNDGTTFMS 170
Db 113 PRIELEVSTETFDVKNQGNN - - YKNEAHRYCALSHNSAADMSSASNFPFLNEGLLDIS 170

Qy 171 LMVNTCYDITAEGVSFVYACAGIGADLTIFDLNKAYQKIGISYPTEPVSAFIG 230
Db 171 FMLNACYDVGEGIPFSPPYCAGITDVLVSMEATNPKISYQSKRLGLSISPEASVFIG 230

Qy 231 GYHGIVGNKFEKIPVTPVVLNDAPQ-TTSASVTLDVGFGEIG 275
Db 231 GHFFKVIGNEFRDPTIPTGSTLAGKGNYPAVILDVCHFGIEMG 276

Search completed: August 27, 2005, 08:42:20
Job time : 36.6863 secs

RESULT 15
US-09-553-662-18

; Sequence 18, Application US/09533662
; Patent No. 6593147
; GENERAL INFORMATION:
; APPLICANT: Barbet, Anthony F.
; APPLICANT: Bowie, Michael V.
; APPLICANT: Burridge, Michael J.
; APPLICANT: Manan, Suman M.
; APPLICANT: McGuire, Travis C.
; APPLICANT: Rurangira, Fred R.
; APPLICANT: Moreland, Annie L.
; APPLICANT: Simbi, Bigboy H.
; APPLICANT: Whitmire, William M.
; APPLICANT: Alleman, Arthur R.
; TITLE OF INVENTION: Nucleic Acid Vaccines Against Rickettsial Diseases and Methods of use
; FILE REFERENCE: UF-167XC3
; CURRENT APPLICATION NUMBER: US/09/553,662
; CURRENT FILING DATE: 2000-04-21
; PRIOR FILING DATE: 1999-06-22
; PRIOR APPLICATION NUMBER: 09/337,827
; PRIOR FILING DATE: 1997-10-17
; PRIOR APPLICATION NUMBER: 08/953,326
; PRIOR FILING DATE: 1996-10-17
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO: 18
; LENGTH: 276
; TYPE: PRT
; ORGANISM: *Ehrlichia chaffeensis*

Result No.	Score	Query Match ID	Description
1	1462	100 0	US-09-811-007-42 Sequence 42, Appl
2	1462	100 0	US-10-062-624-42 Sequence 42, Appl
3	1462	100 0	US-10-059-964-42 Sequence 48, Appl
4	1462	100 0	US-10-062-051-42 Sequence 42, Appl
5	1462	100 0	US-10-062-920-42 Sequence 42, Appl
6	1462	100 0	US-10-314-639-42 Sequence 48, Appl
7	1462	100 0	US-10-680-349-42 Sequence 42, Appl
8	1462	100 0	US-10-731-554-42 Sequence 42, Appl
9	1462	100 0	US-10-901-714-48 Sequence 48, Appl
10	1462	100 0	US-10-901-774-48 Sequence 48, Appl
11	1202.5	82.3	US-09-846-808-14 Sequence 14, Appl
12	1202.5	82.3	US-09-811-007-10 Sequence 10, Appl
13	1202.5	82.3	US-10-062-624-10 Sequence 4, Appl
14	1202.5	82.3	US-10-059-964-4 Sequence 10, Appl
15	1202.5	82.3	US-10-062-051-10 Sequence 14, Appl
16	1202.5	82.3	US-10-062-986-14 Sequence 10, Appl
17	1202.5	82.3	US-10-062-920-10 Sequence 4, Appl
18	1202.5	82.3	US-10-314-639-4 Sequence 14, Appl
19	1202.5	82.3	US-10-369-293-14 Sequence 14, Appl
20	1202.5	82.3	US-10-285-042-14 Sequence 14, Appl
21	1202.5	82.3	US-10-680-349-10 Sequence 10, Appl
22	1202.5	82.3	US-10-731-554-10 Sequence 10, Appl
23	1202.5	82.3	US-10-901-714-4 Sequence 4, Appl
24	1202.5	82.3	US-10-901-774-4 Sequence 4, Appl
25	644.5	44.1	US-09-846-808-19 Sequence 19, Appl
26	644.5	44.1	US-09-811-007-9 Sequence 9, Appl
27	644.5	44.1	US-10-062-624-9 Sequence 9, Appl
28	644.5	44.1	US-10-062-051-9 Sequence 9, Appl
29	644.5	44.1	US-10-284-986-19 Sequence 19, Appl
30	644.5	44.1	US-10-062-920-9 Sequence 9, Appl
31	644.5	44.1	US-10-369-293-19 Sequence 19, Appl
32	644.5	44.1	US-10-285-042-19 Sequence 19, Appl
33	644.5	44.1	US-10-680-349-9 Sequence 9, Appl
34	644.5	44.1	US-10-731-554-9 Sequence 9, Appl
35	642.5	43.9	US-10-062-920-9 Sequence 2, Appl
36	642.5	43.9	US-10-314-639-2 Sequence 2, Appl
37	642.5	43.9	US-10-901-714-2 Sequence 2, Appl
38	642.5	43.9	US-10-901-714-67 Sequence 67, Appl
39	642.5	43.9	US-10-901-774-2 Sequence 2, Appl
40	642.5	43.9	US-10-901-774-67 Sequence 67, Appl
41	629.5	43.1	US-10-062-994-18 Sequence 18, Appl
42	629.5	43.1	US-10-062-994-18 Sequence 18, Appl
43	629.5	43.1	US-10-722-077-18 Sequence 18, Appl
44	621	42.5	US-10-059-964-32 Sequence 32, Appl
45	621	42.5	US-10-314-639-32 Sequence 32, Appl

ALIGNMENTS

RESULT 1
US-09-811-007-42 ; Sequence 42, Application US/09811007
; Publication No. US20030185849A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; ATTORNEY OR AGENT FOR APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; Gens of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/09/811,007
; CURRENT FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: US/09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO: 42
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
US-09-811-007-42

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match ID	Description
1	1462	100 0	Sequence 42, Appl
2	1462	100 0	US-10-062-624-42 Sequence 42, Appl
3	1462	100 0	US-10-059-964-42 Sequence 48, Appl
4	1462	100 0	US-10-062-051-42 Sequence 42, Appl
5	1462	100 0	US-10-062-920-42 Sequence 42, Appl
6	1462	100 0	US-10-314-639-42 Sequence 48, Appl
7	1462	100 0	US-10-680-349-42 Sequence 42, Appl
8	1462	100 0	US-10-731-554-42 Sequence 42, Appl
9	1462	100 0	US-10-901-714-48 Sequence 48, Appl
10	1462	100 0	US-10-901-774-48 Sequence 48, Appl
11	1202.5	82.3	US-09-846-808-14 Sequence 14, Appl

RESULT 2

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Db 61 PINGTNSLTKVFGLIKDKDDITKDDFTRVAPGIDFQNNLISGFSGSIGSMGPRBLE 120
Qy 121 AAYQOFNPKNQTDNNNDTDDGEYXKHFALSKRDAEQQYVNLNGDITMSLMNTCYDIT 180
Db 121 AAYQOFNPKNQTDNNNDTDDGEYXKHFALSKRDAEQQYVNLNGDITMSLMNTCYDIT 180
Qy 181 AEGVSFVPYACAGIGADLITIFKDNLKPAQKGIGISYPTEVSAFIGGYHVGIGNK 240
Db 181 AEGVSFVPYACAGIGADLITIFKDNLKPAQKGIGISYPTEVSAFIGGYHVGIGNK 240
; SEQ ID NO: 48
; LENGTH: 280
; TYPE: PR
; ORGANISM: Ehrlichia canis
; US-10-059-964-48

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Query Match Score 100.0%; Best Local Similarity 100.0%; Matches 280; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MNYYKKILVRSLISLMSLILPYOSFADPGVGSRTNDKKEFYISAKYNPNSISHFRKFSAET 60
Db 1 MNYYKKILVRSLISLMSLILPYOSFADPGVGSRTNDKKEFYISAKYNPNSISHFRKFSAET 60
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2/D1
; CURRENT APPLICATION NUMBER: US10/062,624
; CURRENT FILING DATE: 2002-01-31
; PRIOR APPLICATION NUMBER: 09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO: 42
; LENGTH: 280
; TYPE: PR
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
; US-10-052-624-42

RESULT 3

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Us-10-059-964-48
; Sequence 48, Application US/10062624
; Publication No. US20020115840A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US10/062,051
; CURRENT FILING DATE: 2002-01-31
; PRIORITY: US/09/660,587
; PRIOR FILING DATE: 2000-09-12
; PRIOR APPLICATION NUMBER: 09/261,358
; PRIOR FILING DATE: 1999-03-03
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO: 42
; LENGTH: 280
; TYPE: PR
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
; US-10-052-624-42

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Query Match Score 100.0%; Best Local Similarity 100.0%; Matches 280; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MNYYKKILVRSLISLMSLILPYOSFADPGVGSRTNDKKEFYISAKYNPNSISHFRKFSAET 60
Db 1 MNYYKKILVRSLISLMSLILPYOSFADPGVGSRTNDKKEFYISAKYNPNSISHFRKFSAET 60
; APPLICANT: Rikihisa, Yasuko
; APPLICANT: Ohasi, No
; TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia Chaffeensis
; TITLE OF INVENTION: Chaffeensis

RESULT 5
S-10-062-920-42
Sequence 42, Application US/10062920
Publication No. US20030103991A1
GENERAL INFORMATION:
APPLICANT: Walker, David H.
APPLICANT: McBride, Jere W.
APPLICANT: Yu, Xue-Jie
TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
FILE REFERENCE: D6152CIP2
CURRENT APPLICATION NUMBER: US/10/062,920
CURRENT FILING DATE: 2002-01-31
PRIOR APPLICATION NUMBER: US/09/660,587
PRIOR FILING DATE: 2000-09-12
PRIOR APPLICATION NUMBER: 09/261,358
PRIOR FILING DATE: 1999-03-03
NUMBER OF SEQ ID NOS: 46
SEQ ID NO 42
LENGTH: 280
TYPE: PRT
ORGANISM: Ehrlichia canis
FEATURE:
OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein

US-10-314-639-48
Sequence 48, Application US/10314639
Publication No. US20030103991A1
GENERAL INFORMATION:
APPLICANT: Pittibisa, Yasuji
TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
FILE REFERENCE: 22/27/04021
CURRENT APPLICATION NUMBER: US/10/314,639
CURRENT FILING DATE: 2002-12-09
PRIOR APPLICATION NUMBER: US/09/314,701
PRIOR FILING DATE: 1999-05-19
NUMBER OF SEQ ID NOS: 66
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 48
LENGTH: 280
TYPE: PRT
ORGANISM: Ehrlichia canis
US-10-314-639-48

Query Match 5
Best Local Similarity 100.0%; Score 1462; DB 14; Length 280;
Best Local Similarity 100.0%; Pred. No. 9.3e-136; Mismatches 0; Indels 0; Gaps 0;
Matches 280; Conservative 0; Mi mismatches 0; Mi matches 0; Indels 0; Gaps 0;

Qy 1 MNYYKKLVLRSALISLMSLILPYSFADPVGSRTNDNKEGFYISAKYNPSISHFRKPSAET 60
Db 1 MNYYKKLVLRSALISLMSLILPYSFADPVGSRTNDNKEGFYISAKYNPSISHFRKPSAET 60

Qy 61 PINGTNSLTKKVFGLKKGDTIKKDFTTRAVGSDIDFQNLLSGFSGSGTGYSMGDPRIEL 120
Db 61 PINGTNSLTKKVFGLKKGDTIKKDFTTRAVGSDIDFQNLLSGFSGSGTGYSMGDPRIEL 120

Qy 121 AAYQOFNPKNTNDTNGEYKKHFLSRKDAMEDQQYVTLKNDGITEMSLMNTCYDIT 180
Db 121 AAYQOFNPKNTNDTNGEYKKHFLSRKDAMEDQQYVTLKNDGITEMSLMNTCYDIT 180

Qy 181 AEGVSFVPYACAGIGADLITFKDLNLKFAVQGKIGISYPTEVSAFIGGYYHVGINK 240
Db 181 AEGVSFVPYACAGIGADLITFKDLNLKFAVQGKIGISYPTEVSAFIGGYYHVGINK 240

Qy 241 FEKIPVITPVVLDNDAFQTTSASVTLDVGYFGEIGHMRFTF 280
Db 241 FEKIPVITPVVLDNDAFQTTSASVTLDVGYFGEIGHMRFTF 280

RESULT 6
S-10-314-639-48
Sequence 48, Application US/10314639
Publication No. US20030103991A1
GENERAL INFORMATION:
APPLICANT: Pittibisa, Yasuji
TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
FILE REFERENCE: 22/27/04021
CURRENT APPLICATION NUMBER: US/10/314,639
CURRENT FILING DATE: 2002-12-09
PRIOR APPLICATION NUMBER: US/09/314,701
PRIOR FILING DATE: 1999-05-19
NUMBER OF SEQ ID NOS: 66
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 48
LENGTH: 280
TYPE: PRT
ORGANISM: Ehrlichia canis
FEATURE:
OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein

US-10-680-349-42
Sequence 42, Application US/10680349
Publication No. US/0040198951A1
GENERAL INFORMATION:
APPLICANT: Walker, David H.
APPLICANT: McBride, Jere W.
APPLICANT: Yu, Xue-Jie
TITLE OF INVENTION: Homologous 28-Kilodalton Immunodominant Protein
TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
FILE REFERENCE: D6152CIP2/D1
CURRENT APPLICATION NUMBER: US/10/680,349
CURRENT FILING DATE: 2003-10-07
PRIOR APPLICATION NUMBER: US/10/062,624
PRIOR FILING DATE: 2002-01-31
PRIOR APPLICATION NUMBER: 09/660,587
PRIOR FILING DATE: 2000-09-12
NUMBER OF SEQ ID NOS: 46
SEQ ID NO 42
LENGTH: 280
TYPE: PRT
ORGANISM: Ehrlichia canis
FEATURE:
OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein

US-10-680-349-42
Query Match 6
Best Local Similarity 100.0%; Score 1462; DB 16; Length 280;
Best Local Similarity 100.0%; Pred. No. 9.3e-136; Mismatches 0; Indels 0; Gaps 0;
Matches 280; Conservative 0; Mi mismatches 0; Mi matches 0; Indels 0; Gaps 0;

Qy 1 MNYYKKLVLRSALISLMSLILPYSFADPVGSRTNDNKEGFYISAKYNPSISHFRKPSAET 60

Db 1 MNYKKILVRSALISLMSILPYQSADPVGSRTNDNKGFSYISAKYNPSISHPRKFSAET 60
 Qy 61 PINGNTSLTKVKFLKKQGDITKKDDFTRVAPGIDFQNLLISGSGSGTGYSMNDGPRIELE 120
 Db 61 PINGNTSLTKVKFLKKQGDITKKDDFTRVAPGIDFQNLLISGSGTGYSMNDGPRIELE 120
 Qy 121 AAYQFNPKNTDNNDTDNGEYKHFALSRKDAMEQQVVLKNDGITPMISLMVNTCYDIT 180
 Db 121 AAYQFNPKNTDNNDTDNGEYKHFALSRKDAMEQQVVLKNDGITPMISLMVNTCYDIT 180
 Qy 181 AEGVSFVPYA CAGIGADLITFKDLNLKFAQSKIGISYPTEVSAPIGGYHGVGNK 240
 Db 181 AEGVSFVPYA CAGIGADLITFKDLNLKFAQSKIGISYPTEVSAPIGGYHGVGNK 240
 Qy 241 FEKIPVITPVVLNDAPOQTSSAVTLDVSYFGGBIGMRTF 280
 Db 241 FEKIPVITPVVLNDAPOQTSSAVTLDVSYFGGBIGMRTF 280
 ; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
 US-10-731-554-42

Query Match 100.0%; Score 1462; DB 16; Length 280;
 Best Local Similarity 100.0%; Pred. No. 9.3e-136;
 Matches 280; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MNYKKILVRSALISLMSILPYQSADPVGSRTNDNKGFSYISAKYNPSISHPRKFSAET 60
 Db 1 MNYKKILVRSALISLMSILPYQSADPVGSRTNDNKGFSYISAKYNPSISHPRKFSAET 60
 ; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
 ; GENERAL INFORMATION:
 ; APPLICANT: Walker, David H.
 ; APPLICANT: McBride, Jere W.
 ; APPLICANT: Yu, Xue-Jie
 ; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
 ; FILE REFERENCE: D6152CIP2
 ; CURRENT APPLICATION NUMBER: US/10/731-554
 ; CURRENT FILING DATE: 2003-12-09
 ; PRIOR APPLICATION NUMBER: US/09/811,007
 ; PRIOR FILING DATE: 2001-03-16
 ; PRIOR APPLICATION NUMBER: 09/660,587
 ; PRIOR FILING DATE: 2000-09-12
 ; NUMBER OF SEQ ID NOS: 46
 ; SEQ ID NO: 42
 ; LENGTH: 280
 ; TYPE: PRT
 ; ORGANISM: Ehrlichia canis
 ; FEATURE:
 ; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
 US-10-731-554-42

Query Match 100.0%; Score 1462; DB 16; Length 280;
 Best Local Similarity 100.0%; Pred. No. 9.3e-136;
 Matches 280; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MNYKKILVRSALISLMSILPYQSADPVGSRTNDNKGFSYISAKYNPSISHPRKFSAET 60
 Db 1 MNYKKILVRSALISLMSILPYQSADPVGSRTNDNKGFSYISAKYNPSISHPRKFSAET 60
 Qy 61 PINGNTSLTKVKFLKKQGDITKKDDFTRVAPGIDFQNLLISGSGTGYSMNDGPRIELE 120
 Db 61 PINGNTSLTKVKFLKKQGDITKKDDFTRVAPGIDFQNLLISGSGTGYSMNDGPRIELE 120
 Qy 181 AEGVSFVPYA CAGIGADLITFKDLNLKFAQSKIGISYPTEVSAPIGGYHGVGNK 240
 Db 181 AEGVSFVPYA CAGIGADLITFKDLNLKFAQSKIGISYPTEVSAPIGGYHGVGNK 240
 Qy 241 FEKIPVITPVVLNDAPOQTSSAVTLDVSYFGGBIGMRTF 280
 Db 241 FEKIPVITPVVLNDAPOQTSSAVTLDVSYFGGBIGMRTF 280
 ; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
 US-10-731-554-42

Query Match 100.0%; Score 1462; DB 16; Length 280;
 Best Local Similarity 100.0%; Pred. No. 9.3e-136;
 Matches 280; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MNYKKILVRSALISLMSILPYQSADPVGSRTNDNKGFSYISAKYNPSISHPRKFSAET 60
 Db 1 MNYKKILVRSALISLMSILPYQSADPVGSRTNDNKGFSYISAKYNPSISHPRKFSAET 60
 ; TITLE OF INVENTION: CHAFFENNISIS
 ; FILE REFERENCE: 22/27-04109
 ; CURRENT APPLICATION NUMBER: US/10/901,714
 ; CURRENT FILING DATE: 2004-07-29
 ; PRIOR APPLICATION NUMBER: 09/314,701
 ; PRIOR FILING DATE: 1999-05-19
 ; PRIOR APPLICATION NUMBER: 60/100,843
 ; PRIOR FILING DATE: 1998-09-18
 ; NUMBER OF SEQ ID NOS: 69
 ; SEQ ID NO: 48
 ; SOFTWARE: PatentIn Ver. 3.2
 ; LENGTH: 280
 ; TYPE: PRT
 ; ORGANISM: Ehrlichia canis
 US-10-901-714-48

RESULT 9
 US-10-901-714-48
 Sequence 48, Application US/10901714
 ;

RESULT 14
US-10-659-964-4
; Application US/10059964
; Publication No. US20020120115A1
; GENERAL INFORMATION:
; APPLICANT: Rikihsa, Yabiko
; APPLICANT: Ohasi, No.
; TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
; TITLE OF INVENTION: Chaffeensis
; FILE REFERENCE: 22/27/04021
; CURRENT APPLICATION NUMBER: US/10/059, 964
; EARLIER APPLICATION NUMBER: US/059, 964
; EARLIER FILING DATE: 2002-01-28
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 4
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
; US-10-659-964-4

Matches 225; Conservative 26; Mismatches 29; Indels 3; Gaps 1;
Query 1 MNYYKILVRSALISLMSLIPQSADPVGR--TNDNKEGFVISAKYNPNSHFRKFA 57
Db 1 MNYYKIFVSSLALISLMSLIPQSADPVTSNDTGINDSREGFVISVKYNPSHFRKFA 60
Qy 58 EETPINGNTSLTKVFGLKKGDTIKKDFFTRAVPGIDFQNNLJSGFSGIGYSMDGPRI 117
Db 61 EEARINGNTSLTKVFGLKKGDTIKKDFFTRAVPGIDFQNNLJSGFSGIGYSMDGPRI 120
Qy 118 ELEAYQQNPKNITDNNKDGEYXKHFALLSKDAMEDQQYVVLKNDGIDTMSLMLNTCY 177
Db 121 ELEAYQKDAKNDNDTNSGDYKVFGLSREDAIDKKYVVLKNEGIDTMSLMLNTCY 180
Qy 178 DITAEGVSFVPAACAGIGADLITIPKDLNKPAQKGKIGSYTPEVSAFIGGYHGVI 237
Db 181 DITAEGVPPTFVPAACAGVGADLINVFKDFNLKFSYQKGKIGSYTPEVSAFIGGYHGVI 240
Qy 238 GNKEPKIPVTPVVLNDAFQQTSSAVTLDVGYGGTGMRFTE 280
Db 241 GNNFNKIPVTPVVLNDAFQQTSSAVTLDVGYGGTGMRFTE 283

Query Match 82.3%; Score 1202.5; DB 14; Length 283;
Best Local Similarity 79.5%; Pred. No. 4.e-110;
Matches 225; Conservative 26; Mismatches 29; Indels 3; Gaps 1;
Query 1 MNYYKILVRSALISLMSLIPQSADPVGR--TNDNKEGFVISAKYNPNSHFRKFA 57
Db 1 MNYYKIFVSSLALISLMSLIPQSADPVTSNDTGINDSREGFVISVKYNPSHFRKFA 60
Qy 58 EETPINGNTSLTKVFGLKKGDTIKKDFFTRAVPGIDFQNNLJSGFSGIGYSMDGPRI 117
Db 61 EEARINGNTSLTKVFGLKKGDTIKKDFFTRAVPGIDFQNNLJSGFSGIGYSMDGPRI 120
Qy 118 ELEAAYQQNPKNITDNNKDGEYXKHFALLSKDAMEDQQYVVLKNDGIDTMSLMLNTCY 177
Db 121 ELEAAYQKDAKNDNDTNSGDYKVFGLSREDAIDKKYVVLKNEGIDTMSLMLNTCY 180
Qy 178 DITAEGVSFVPAACAGIGADLITIPKDLNKPAQKGKIGSYTPEVSAFIGGYHGVI 237
Db 181 DITAEGVPPTFVPAACAGVGADLINVFKDFNLKFSYQKGKIGSYTPEVSAFIGGYHGVI 240
Qy 238 GNKEPKIPVTPVVLNDAFQQTSSAVTLDVGYGGTGMRFTE 280
Db 241 GNNFNKIPVTPVVLNDAFQQTSSAVTLDVGYGGTGMRFTE 283

Search completed. August 27, 2005, 08:59:34
Job time : 199.562 secs

RESULT 15
US-10-06-051-10
; Sequence 10, Application US/10062051

Query Match 82.3%; Score 1202.5; DB 13; Length 283;
Best Local Similarity 79.5%; Pred. No. 4.e-110;
Matches 225; Conservative 26; Mismatches 29; Indels 3; Gaps 1;
Query 1 MNYYKILVRSALISLMSLIPQSADPVGR--TNDNKEGFVISAKYNPNSHFRKFA 57
Db 1 MNYYKIFVSSLALISLMSLIPQSADPVTSNDTGINDSREGFVISVKYNPSHFRKFA 60
Qy 58 EETPINGNTSLTKVFGLKKGDTIKKDFFTRAVPGIDFQNNLJSGFSGIGYSMDGPRI 117
Db 61 EEARINGNTSLTKVFGLKKGDTIKKDFFTRAVPGIDFQNNLJSGFSGIGYSMDGPRI 120
Qy 118 ELEAYQQNPKNITDNNKDGEYXKHFALLSKDAMEDQQYVVLKNDGIDTMSLMLNTCY 177
Db 121 ELEAYQKDAKNDNDTNSGDYKVFGLSREDAIDKKYVVLKNEGIDTMSLMLNTCY 180
Qy 178 DITAEGVSFVPAACAGIGADLITIPKDLNKPAQKGKIGSYTPEVSAFIGGYHGVI 237
Db 181 DITAEGVPPTFVPAACAGVGADLINVFKDFNLKFSYQKGKIGSYTPEVSAFIGGYHGVI 240
Qy 238 GNKEPKIPVTPVVLNDAFQQTSSAVTLDVGYGGTGMRFTE 280
Db 241 GNNFNKIPVTPVVLNDAFQQTSSAVTLDVGYGGTGMRFTE 283